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ーベック係数を有する特定の複合酸化物から選ばれたものであることを特徴とする熱電変換素子、並びに該熱電変換素子を用いた熱電変換モジュール及び熱電変換方法を提供するものである。本発明の熱電変換素子は、電気絶縁性基板上に、p型熱電変換材料とn型熱電変換材料が、薄膜状に形成されたものであり、各種の任意の形状の基板上に熱電変換素子を形成できることから、多様な形状の熱電変換素子とすることができる。

明 細 書

熱電変換素子及び熱電変換モジュール

技術分野

[0001] 本発明は、熱電変換素子、熱電変換モジュール及び熱電変換方法に関する。

背景技術

[0002] 我が国では、一次供給エネルギーからの有効なエネルギーの得率は30%程度であり、約70%ものエネルギーを熱として大気中に廃棄している。また、工場、ごみ焼却場などにおいて燃焼により生ずる熱も、他のエネルギーに変換されることなく大気中に廃棄されている。このように我々人類は、非常に多くの熱エネルギーを無駄に廃棄しており、化石エネルギーの燃焼等の行為から僅かなエネルギーしか獲得していない。

[0003] エネルギーの得率を向上させるためには、大気中に廃棄されている熱エネルギーを利用することが有効である。そのためには熱エネルギーを直接電気エネルギーに変換する熱電変換は効果的な手段と考えられる。熱電変換とはゼーベック効果を利用したものであり、熱電変換材料の両端に温度差をつけることで電位差を生じさせ、発電を行うエネルギー変換法である。

[0004] このような熱電変換を利用する発電、即ち、熱電発電では、熱電変換材料の一端を廃熱により生じた高温部に配置し、もう一端を大気中に配置して、両端に外部抵抗を接続するだけで電気が得られ、一般の発電に必要なモーターやタービン等の可動装置は全く必要ない。このためコストも安く、燃焼等によるガスの排出も無く、熱電変換材料が劣化するまで継続的に発電を行うことができる。また熱電発電は高出力密度での発電が可能であるため、発電器(モジュール)そのものが小型、軽量化でき携帯電話やノート型パソコン等の移動用電源としても用いることが可能である。

[0005] この様に、熱電発電は今後心配されるエネルギー問題の解決の一端を担うと期待されている。熱電発電を実現するためには、高い変換効率を有し、耐熱性、化学的耐久性等に優れた熱電変換材料により構成される熱電変換モジュールが必要となる。

[0006] これまでに高温・空气中で優れた熱電性能を示す物質として、 $\text{Ca}_3\text{Co}_4\text{O}_9$ 等の CoO_2 系層状酸化物が報告されており、熱電変換材料についての開発は、進行しつつある(例えば、下記非特許文献1参照)。

[0007] しかしながら、熱電変換材料を用いて効率の良い熱電発電を実現するために必要となる熱電変換モジュール、すなわち発電器の開発が遅れているのが現状である。
非特許文献1: R. Funahashiら、Jpn. J. Appl. Phys. 39, L1127 (2000)。

発明の開示

発明が解決しようとする課題

[0008] 本発明は、上記した従来技術の現状に鑑みてなされたものであり、その主な目的は、熱電発電を実現するために必要な高い変換効率を有し、且つ熱的安定性、化学的耐久性等に優れた熱電変換素子及び熱電変換モジュールを提供することである。

課題を解決するための手段

[0009] 本発明者は、上記した目的を達成すべく鋭意研究を重ねてきた。その結果、特定の複合酸化物からなるp型熱電変換材料とn型熱電変換材料の薄膜を電気絶縁性基板上に形成し、p型熱電変換材料の一端とn型熱電変換材料の一端を電氣的に接続することによって得られる素子は、高い変換効率と良好な導電性を有し、且つ熱的安定性、化学的耐久性等も良好であり、熱電変換素子として優れた性能を発揮し得るものであることを見出し、ここに本発明を完成するに至った。

[0010] 即ち、本発明は、下記の熱電変換素子、熱電変換モジュール及び熱電変換方法を提供するものである。

1. 電気絶縁性基板上に形成されたp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を電氣的に接続してなる熱電変換素子であって、

(i) p型熱電変換材料が、

一般式(1): $\text{Ca}_a\text{A}^1_b\text{Co}_c\text{A}^2_d\text{O}_e$ (式中、 A^1 は、Na、K、Li、Ti、V、Cr、Mn、Fe、Ni、Cu、Zn、Pb、Sr、Ba、Al、Bi、Yおよびランタノイドからなる群から選択される一種又は二種以上の元素であり、 A^2 は、Ti、V、Cr、Mn、Fe、Ni、Cu、Ag、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $2.2 \leq a \leq 3.6$; $0 \leq b \leq 0.8$; $2.0 \leq c \leq 4.5$; $0 \leq d \leq 2.0$; $8 \leq e \leq 10$ である。)で表される複合酸化物、及び

一般式(2): $\text{Bi}_f \text{Pb}_g \text{M}^1_h \text{Co}_i \text{M}^2_j \text{O}_k$ (式中、 M^1 は、Na、K、Li、Ti、V、Cr、Mn、Fe、Ni、Cu、Zn、Pb、Ca、Sr、Ba、Al、Yおよびランタノイドからなる群から選択される一種又は二種以上の元素であり、 M^2 は、Ti、V、Cr、Mn、Fe、Ni、Cu、Ag、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $1.8 \leq f \leq 2.2$; $0 \leq g \leq 0.4$; $1.8 \leq h \leq 2.2$; $1.6 \leq i \leq 2.2$; $0 \leq j \leq 0.5$; $8 \leq k \leq 10$ である。)で表される複合酸化物からなる群から選ばれた少なくとも一種の酸化物であり、

(ii) n型熱電変換材料が、

一般式(3): $\text{Ln}_m \text{R}^1_n \text{Ni}_p \text{R}^2_q \text{O}_r$ (式中、Lnはランタノイドから選択される一種又は二種以上の元素であり、 R^1 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 R^2 は、Ti、V、Cr、Mn、Fe、Co、Cu、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq m \leq 1.7$; $0 \leq n \leq 0.5$; $0.5 \leq p \leq 1.2$; $0 \leq q \leq 0.5$; $2.7 \leq r \leq 3.3$ である。)で表される複合酸化物、

一般式(4): $(\text{Ln}_s \text{R}^3_t)_2 \text{Ni}_u \text{R}^4_v \text{O}_w$ (式中、Lnはランタノイドから選択される一種又は二種以上の元素であり、 R^3 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 R^4 は、Ti、V、Cr、Mn、Fe、Co、Cu、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq s \leq 1.2$; $0 \leq t \leq 0.5$; $0.5 \leq u \leq 1.2$; $0 \leq v \leq 0.5$; $3.6 \leq w \leq 4.4$ である。)で表される複合酸化物、

一般式(5): $\text{A}_x \text{Zn}_y \text{O}_z$ (式中、AはGa又はAlであり、 $0 \leq x \leq 0.1$; $0.9 \leq y \leq 1$; $0.9 \leq z \leq 1.1$ である。)で表される酸化物、及び

一般式(6): $\text{Sn}_{xx} \text{In}_{yy} \text{O}_{zz}$ (式中、 $0 \leq xx \leq 1$; $0 \leq yy \leq 2$; $1.9 \leq zz \leq 3$ である。)で表される複合酸化物

からなる群から選ばれた少なくとも一種の酸化物である、

ことを特徴とする熱電変換素子。

2. p型熱電変換材料が、一般式: $\text{Ca}_a \text{A}^1_b \text{Co}_4 \text{O}_e$ (式中、 A^1 は、Na、K、Li、Ti、V、Cr、Mn、Fe、Ni、Cu、Zn、Pb、Sr、Ba、Al、Bi、Y及びランタノイドからなる群から選択される一種又は二種以上の元素であり、 $2.2 \leq a \leq 3.6$; $0 \leq b \leq 0.8$; $8 \leq e \leq 10$ である。)で表される複合酸化物、及び一般式: $\text{Bi}_f \text{Pb}_g \text{M}^1_h \text{Co}_2 \text{O}_k$ (式中、 M^1 は、Sr、Ca及びBaからなる群から選択される一種又は二種以上の元素であり、 $1.8 \leq f \leq 2.2$; $0 \leq g \leq 0.4$

; $1.8 \leq h \leq 2.2$; $8 \leq k \leq 10$ である。)で表される複合酸化物からなる群から選ばれた少なくとも一種の酸化物であり、

n型熱電変換材料が、一般式: $\text{Ln}_m \text{R}_n^1 \text{NiO}_r$ (式中、Lnはランタノイド元素であり、 R^1 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq m \leq 1.2$; $0 \leq n \leq 0.5$; $2.7 \leq r \leq 3.3$ である。)で表される複合酸化物、一般式: $(\text{Ln}_s \text{R}_t^3)_2 \text{NiO}_w$ (式中、Lnはランタノイド元素であり、 R^3 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq s \leq 1.2$; $0 \leq t \leq 0.5$; $3.6 \leq w \leq 4.4$ である。)で表される複合酸化物、及び一般式: $\text{Ln}_x \text{R}_y^5 \text{NiR}_p^6 \text{O}_{q'} \text{O}_{r'}$ (式中、Lnは、ランタノイド元素であり、 R^5 は、Na、K、Sr、Ca、Bi及びNdからなる群から選択される少なくとも一種の元素であり、 R^6 は、Ti、V、Cr、Mn、Fe、Co及びCuからなる群から選択される少なくとも一種の元素であり、 $0.5 \leq x \leq 1.2$; $0 \leq y \leq 0.5$; $0.5 \leq p \leq 1.2$; $0.01 \leq q' \leq 0.5$; $2.8 \leq r' \leq 3.2$ である。)で表される複合酸化物からなる群から選ばれた少なくとも一種の酸化物である

上記項1に記載の熱電変換素子。

3. p型熱電変換材料の薄膜とn型熱電変換材料の薄膜を電氣的に接続する方法が、p型熱電変換材料薄膜の一端とn型熱電変換材料薄膜の一端を直接接触させる方法、p型熱電変換材料薄膜の一端とn型熱電変換材料薄膜の一端を導電性材料を介して接触させる方法、又はp型熱電変換材料薄膜の一端とn型熱電変換材料薄膜の一端を直接接触させ、該接触部分を導電性材料で被覆する方法である

上記項1に記載の熱電変換素子。

4. p型熱電変換材料の薄膜とn型熱電変換材料の薄膜が、電気絶縁性基板の同一面又は異なる面に形成されたものである上記項1に記載の熱電変換材料。

5. 電気絶縁性基板が、プラスチック材料からなる基板である請求項1に記載の熱電変換材料。

6. 293K〜1073Kの温度範囲において、熱起電力が $60 \mu\text{V}/\text{K}$ 以上である上記項1に記載の熱電変換素子。

7. 293K〜1073Kの温度範囲において、電気抵抗が $1\text{K}\Omega$ 以下である上記項1に記載の熱電変換素子。

8. 上記項1に記載された熱電変換素子を複数個用い、一個の熱電変換素子のp型熱電変換材料の未接合の端部を、他の熱電変換素子のn型熱電変換材料の未接合の端部に接続する方法で複数の熱電変換素子を直列に接続してなる熱電変換モジュール。

9. 上記項8に記載の熱電発電モジュールの一端を高温部に配置し、他端を低温部に配置することを特徴とする熱電変換方法。

[0011] 本発明の熱電変換素子は、p型熱電変換材料とn型熱電変換材料として特定の複合酸化物を用い、これらの複合酸化物の薄膜を電気絶縁性基板上に形成し、p型熱電変換材料の一端とn型熱電変換材料の一端とを電氣的に接続してなるものである。

[0012] この様な特定の複合酸化物を組み合わせる用いることによって、高い熱電変換効率と良好な電気伝導性を有する熱電変換素子を得ることができる。更に、薄膜状に形成することにより、各種の任意の形状の基板上に熱電変換素子を形成することが可能となり、多様な形状の熱電変換素子を容易に得ることができる。その結果、電子回路への組み込みや微細部分での利用など各種の応用が可能となる。さらにボイラーや自動車ラジエーターのように気流中で熱電変換モジュールを用いる場合、モジュールが気流を妨げ、圧損が生じないようにフィン型にする必要があるが、この様な用途においても薄膜状熱電素子が有効である。

[0013] 以下、本発明で用いるp型熱電変換材料とn型熱電変換材料について説明する。

[0014] p型熱電変換材料

p型熱電変換材料としては、下記一般式(1)で表される複合酸化物、及び一般式(2)で表される複合酸化物からなる群から選ばれた少なくとも一種の酸化物を用いることができる：

一般式(1)： $\text{Ca}_a \text{A}^1_b \text{Co}_c \text{A}^2_d \text{O}_e$ (式中、 A^1 は、Na、K、Li、Ti、V、Cr、Mn、Fe、Ni、Cu、Zn、Pb、Sr、Ba、Al、Bi、Yおよびランタノイドからなる群から選択される一種又は二種以上の元素であり、 A^2 は、Ti、V、Cr、Mn、Fe、Ni、Cu、Ag、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $2.2 \leq a \leq 3.6$; $0 \leq b \leq 0.8$; $2.0 \leq c \leq 4.5$; $0 \leq d \leq 2.0$; $8 \leq e \leq 10$ である。)、

一般式(2): $\text{Bi}_f \text{Pb}_g \text{M}^1_h \text{Co}_i \text{M}^2_j \text{O}_k$ (式中、 M^1 は、Na、K、Li、Ti、V、Cr、Mn、Fe、Ni、Cu、Zn、Pb、Ca、Sr、Ba、Al、Yおよびランタノイドからなる群から選択される一種又は二種以上の元素であり、 M^2 は、Ti、V、Cr、Mn、Fe、Ni、Cu、Ag、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $1.8 \leq f \leq 2.2$; $0 \leq g \leq 0.4$; $1.8 \leq h \leq 2.2$; $1.6 \leq i \leq 2.2$; $0 \leq j \leq 0.5$; $8 \leq k \leq 10$ である。)。

[0015] 上記一般式(1)及び(2)において、ランタノイドとしては、La、Ce、Pr、Nd、Sm、Eu、Gd、Tb、Dy、Ho、Er、Tm、Yb、Lu等を例示できる。

[0016] この様な一般式で表される複合酸化物は、Ca、Co及びOにより構成される $\text{Ca}_2 \text{CoO}_3$ という組成比、又はBi、 M^1 及びOにより構成される $\text{Bi}_2 \text{M}^1_2 \text{O}_4$ という組成比の岩塩型構造を有する層と、六つのOが一つのCoに八面体配位し、その八面体がお互いに辺を共有するように二次元的に配列した CoO_2 層が交互に積層した構造を有するものであり、前者の場合、 $\text{Ca}_2 \text{CoO}_3$ のCaの一部が A^1 で置換され、さらにこの層のCoの一部及び CoO_2 層のCoの一部が A^2 によって置換されており、後者ではBiの一部がPb又は M^1 の一部で置換され、Coの一部が M^2 によって置換されている。

[0017] これらの複合酸化物はp型熱電変換材料として高いゼーベック係数を有し、且つ電気伝導性も良好である。例えば、100K以上の温度で $100 \mu \text{V/K}$ 程度以上のゼーベック係数と、 $50 \text{m} \Omega \text{cm}$ 程度以下、好ましくは $30 \text{m} \Omega \text{cm}$ 程度以下の電気抵抗率を有し、温度の上昇とともにゼーベック係数が増加し、電気抵抗率が減少する傾向を示すものを得ることができる。

[0018] 上記した複合酸化物の中で、好ましい酸化物の一例として、一般式: $\text{Ca}_a \text{A}^1_b \text{Co}_4 \text{O}_e$ (式中、 A^1 は、Na、K、Li、Ti、V、Cr、Mn、Fe、Ni、Cu、Zn、Pb、Sr、Ba、Al、Bi、Y及びランタノイドからなる群から選択される一種又は二種以上の元素であり、 $2.2 \leq a \leq 3.6$; $0 \leq b \leq 0.8$; $8 \leq e \leq 10$ である。)で表される複合酸化物、及び一般式: $\text{Bi}_f \text{Pb}_g \text{M}^1_h \text{Co}_2 \text{O}_k$ (式中、 M^1 は、Sr、Ca及びBaからなる群から選択される一種又は二種以上の元素であり、 $1.8 \leq f \leq 2.2$; $0 \leq g \leq 0.4$; $1.8 \leq h \leq 2.2$; $8 \leq k \leq 10$ である。)で表される複合酸化物からなる群から選ばれた少なくとも一種の酸化物等を挙げることができる。これらの酸化物は、例えば、100K以上の温度で $100 \mu \text{V/K}$ 程度以上のゼーベック係数と、 $100 \text{m} \Omega \text{cm}$ 程度以下の電気抵抗率を有し、温度の上昇とともにゼーベック

係数が増加し、電気抵抗率が減少する傾向を示すものとすることができる。

[0019] n型熱電変換材料

n型熱電変換材料としては、下記一般式(3)で表される複合酸化物、一般式(4)で表される複合酸化物、一般式(5)で表される複合酸化物、及び一般式(6)で表される複合酸化物からなる群から選ばれた少なくとも一種の酸化物を用いることができる：

一般式(3)： $\text{Ln}_m \text{R}_n^1 \text{Ni}_p \text{R}_q^2 \text{O}_r$ (式中、Lnはランタノイドから選択される一種又は二種以上の元素であり、 R^1 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 R^2 は、Ti、V、Cr、Mn、Fe、Co、Cu、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq m \leq 1.7$ ； $0 \leq n \leq 0.5$ ； $0.5 \leq p \leq 1.2$ ； $0 \leq q \leq 0.5$ ； $2.7 \leq r \leq 3.3$ である。)、

一般式(4)： $(\text{Ln}_s \text{R}_t^3)_2 \text{Ni}_u \text{R}_v^4 \text{O}_w$ (式中、Lnはランタノイドから選択される一種又は二種以上の元素であり、 R^3 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 R^4 は、Ti、V、Cr、Mn、Fe、Co、Cu、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq s \leq 1.2$ ； $0 \leq t \leq 0.5$ ； $0.5 \leq u \leq 1.2$ ； $0 \leq v \leq 0.5$ ； $3.6 \leq w \leq 4.4$ である。)、

一般式(5)： $\text{A}_x \text{Zn}_y \text{O}_z$ (式中、AはGa又はAlであり、 $0 \leq x \leq 0.1$ ； $0.9 \leq y \leq 1$ ； $0.9 \leq z \leq 1.1$ である。)、

一般式(6)： $\text{Sn}_{xx} \text{In}_{yy} \text{O}_{zz}$ (式中、 $0 \leq xx \leq 1$ ； $0 \leq yy \leq 2$ ； $1.9 \leq zz \leq 3$ である。)。

[0020] 尚、上記一般式において、ランタノイド元素としては、La、Ce、Pr、Nd、Sm、Eu、Gd、Tb、Dy、Ho、Er、Tm、Lu等を例示できる。また、一般式(3)において、m値は、 $0.5 \leq m \leq 1.7$ であり、 $0.5 \leq m \leq 1.2$ であることが好ましい。

[0021] 上記各一般式で表される複合酸化物は、負のゼーベック係数を有するものであり、該酸化物からなる材料の両端に温度差を生じさせた場合に、熱起電力により生じる電位は、高温側の方が低温側に比べて高くなり、n型熱電変換材料としての特性を示す。

[0022] 例えば、上記一般式(3)で表される複合酸化物及び一般式(4)で表される複合酸化物は、373K以上の温度において負のゼーベック係数を有し、例えば、373K以上の温度で $-1 \sim -20 \mu\text{V/K}$ 程度のゼーベック係数を有するものとなる。更に、これら

の複合酸化物は、電気伝導性がよく、低い電気抵抗率を示し、例えば、373K以上の温度において、 $20\text{m}\Omega\text{cm}$ 程度以下の電気抵抗率を有するものとすることができる。

- [0023] 上記した一般式(3)で表される複合酸化物はペロブスカイト型の結晶構造を有し、一般式(4)で表される複合酸化物は一般に層状ペロブスカイトと呼ばれる結晶構造を有するものであり、一般に前者が ABO_3 構造、後者が A_2BO_4 構造とも呼ばれる。どちらの複合酸化物もLnの一部が R^1 又は R^3 で置換され、Niの一部が R^2 又は R^4 で置換されている。
- [0024] また、一般式(5)で表される複合酸化物及び一般式(6)で表される複合酸化物は、透明導電膜の材料などとして知られている酸化物であり、例えば、100K以上の温度で $-100\mu\text{V/K}$ 以下のゼーベック係数を有し、更に、電気伝導性がよく、低い電気抵抗率を示し、100K以上の温度において、 $100\text{m}\Omega\text{cm}$ 以下の電気抵抗率である。
- [0025] これらの内で、一般式(5)で表される複合酸化物は六方晶ウルツ型構造を有し、一般式(6)で表される複合酸化物は立方晶ルチル構造または正方晶bcc構造を有するものである。
- [0026] 上記したn型熱電変換材料の中で、好ましい複合酸化物の一例として、一般式： $\text{Ln}_m\text{R}_n^1\text{NiO}_r$ (式中、Lnはランタノイドから選択される一種又は二種以上の元素であり、 R^1 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq m \leq 1.2$; $0 \leq n \leq 0.5$; $2.7 \leq r \leq 3.3$ である。)で表される複合酸化物、一般式： $(\text{Ln}_s\text{R}_t^3)_2\text{NiO}_w$ (式中、Lnはランタノイドから選択される一種又は二種以上の元素であり、 R^3 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq s \leq 1.2$; $0 \leq t \leq 0.5$; $3.6 \leq w \leq 4.4$ である。)で表される複合酸化物、一般式： $\text{Ln}_x\text{R}_y^5\text{Ni}_p\text{R}_{q'}^6\text{O}_{r'}$ (式中、Lnはランタノイドから選択される一種又は二種以上の元素であり、 R^5 は、Na、K、Sr、Ca、Bi及びNdからなる群から選択される少なくとも一種の元素であり、 R^6 は、Ti、V、Cr、Mn、Fe、Co及びCuからなる群から選択される少なくとも一種の元素であり、 $0.5 \leq x \leq 1.2$; $0 \leq y \leq 0.5$; $0.5 \leq p \leq 1.2$; $0.01 \leq q' \leq 0.5$; $2.8 \leq r' \leq 3.2$ である。)で表される複合酸化物等を挙げることができる。
- [0027] これらの内で、一般式： $\text{Ln}_m\text{R}_n^1\text{NiO}_r$ で表される複合酸化物と、一般式： $(\text{Ln}_s\text{R}_t^3)_2$

NiO_w で表される複合酸化物は、例えば100K以上の温度で-1〜-30mV/K程度のゼーベック係数を有し、且つ低い電気抵抗率を示す。また、例えば、100K以上の温度において、10mΩcm程度以下の電気抵抗率を有するものとすることができる。

[0028] また、一般式： $\text{Ln}_x \text{R}_y^5 \text{Ni}_p \text{R}_q^6 \text{O}_r$ で表される複合酸化物は、100℃以上の温度において負のゼーベック係数を有するものであり、更に、電気伝導性がよく、低い電気抵抗率を示し、100℃以上の温度において、10mΩcm以下の電気抵抗率とすることができる。

[0029] 熱電変換素子

本発明の熱電変換素子は、電気絶縁性基板上に、上記したp型熱電変換材料とn型熱電変換材料の薄膜を形成し、該p型熱電変換材料薄膜の一端と、n型熱電変換材料薄膜の一端とを電氣的に接続してなるものである。

[0030] (1) 電気絶縁性基板：

電気絶縁性基板としては、特に限定はなく、酸化物薄膜の形成のために熱処理を行う場合には、熱処理温度において変質を生じないものであればよい。従って、使用できる基板の種類が非常に多く、安価な基板を使用可能である。また、ガラス基板、セラミックス基板などの熱伝導率が低い基板を使用できるので、この様な基板を用いることにより、形成される複合酸化物薄膜の熱電変換性能に対する基板温度の影響を大きく低減できる。

[0031] また、熱処理温度において変質しない材質であれば、ポリイミド等の各種プラスチック材料を基板として用いることも可能である。また、後述する薄膜形成法の中で、気相蒸着法、エアロゾル堆積法等の方法によって熱電変換材料薄膜を形成する場合には、熱処理を行わない場合にも優れた熱電変換性能を有する薄膜を形成できるので、例えば、ポリエチレン、ポリプロピレン、ポリスチレン、ポリエチレンテレフタレート(PET)等の耐熱性の比較的低いプラスチック材料を基板として、その上に優れた性能の熱電変換材料薄膜を形成することもできる。本発明によれば、この様な各種プラスチック材料を基板として用いることができ、その柔軟性、変形性などの特性を利用して幅広い用途への利用が可能となる。また、例えば、有機薄膜トランジスタ(有機TFT)等を熱的に損傷することなく熱電変換材料薄膜を形成できるので、各種フレキシ

ブルデバイスへの応用が可能となる。

[0032] 本発明では、特に、25℃における熱伝導率が $10\text{W}/\text{m}\cdot\text{K}$ 程度以下の低熱伝導率の基板を用いることが好ましく、より好ましく熱伝導率 $5\text{W}/\text{m}\cdot\text{K}$ 程度以下、更に好ましくは熱伝導率 $2\text{W}/\text{m}\cdot\text{K}$ 程度以下の基板を用いることがよい。

[0033] 電気絶縁性基板の形状については、特に限定はなく、目的とする熱電変換素子の使用方法に応じて、任意の形状とすることができる。

[0034] 例えば、パイプ状に成形した基板を用いる場合には、その片面又は両面に複合酸化物の薄膜を形成することにより、パイプ状の熱電変換素子とすることができる。このような形状の熱電変換素子では、例えば、パイプ内部に燃焼ガスを通過させることにより、ガスの導入部分と排出部分の温度差を利用して熱電発電を行うことができる。斯かる熱電変換素子を利用すれば、例えば、自動車の排気ガスを利用した発電などが可能となる。

[0035] また、柔軟な電気絶縁性プラスチックフィルムを基板とする場合には、複合酸化物の薄膜を形成して熱電変換素子を得た後、プラスチックフィルム基板の巻き取りや折り曲げなどを行うことにより、熱電変換素子を変形させることが可能である。

[0036] (2)熱電変換材料薄膜：

p型熱電変換材料薄膜とn型熱電変換材料薄膜の膜厚については、特に限定的ではなく、これらの薄膜の使用態様に応じて良好な熱電変換性能を発揮できる範囲に適宜設定すればよく、例えば、 100nm 程度以上、好ましくは 300nm 程度以上の厚さとすることによって、良好な性能を発揮できる。また、膜厚の上限については、薄膜としての用途を考える場合には、通常、 $10\mu\text{m}$ 程度以下、好ましくは $5\mu\text{m}$ 程度以下、より好ましくは $2\mu\text{m}$ 程度以下とすればよい。

[0037] p型熱電変換材料薄膜及びn型熱電変換材料薄膜の形状についても特に限定はなく、基板の形状に応じた任意の形状、大きさとすることができる。例えば、板状の基板を用いる場合には、p型熱電変換材料薄膜とn型熱電変換材料薄膜を、基板の一方の面に同時に形成するか、或いは、一方の面にp型熱電変換材料薄膜を形成し、他方の面にn型熱電変換材料薄膜を形成することができる。これらの薄膜は、基板の一部にのみ形成してもよく、全面に形成しても良い。また、薄膜の長辺をできるだけ

長くすることにより、変換材料の薄膜の両端部の温度差を大きくして、電圧を高めることができる。また、短くすることで電気抵抗を下げることもできる。

[0038] パイプ状の基板を用いる場合にも、同様に、パイプの外面に両方の薄膜を形成してもよく、或いは、外面に一方の薄膜を形成し、内面に他方の薄膜を形成してもよい。

[0039] (3) 薄膜形成法

電気絶縁性基板上にp型熱電変換材料とn型熱電変換材料の薄膜を形成する方法については、特に限定されるものではなく、上記した組成を有する単結晶薄膜又は多結晶薄膜を形成できる方法であればよい。

[0040] 例えば、気相蒸着法を用いた薄膜製造法；ディップコート法、スピコート法、塗布法、スプレー噴霧法などの溶液原料を用いた薄膜製造法；複合酸化物の微粉末を吹き付けるエアロゾル堆積法などの公知の方法を適用できる。更に、融液を用いたフラックス法や融液を用いることなく原料を溶融・凝固させる方法などの単結晶薄膜の製造方法も適用できる。

[0041] これらの被膜形成方法は、いずれも公知の条件に従って実施することができる。以下、これらの内の代表的な方法についてより具体的に説明する。

[0042] (i) 気相蒸着法：

以下、気相蒸着法による薄膜製造方法について、より詳細に説明する。

[0043] 原料物質としては、気相蒸着法によって気化させて基板上に堆積させることにより、酸化物を形成し得るものであれば特に限定なく使用できる。例えば、構成金属成分を含む金属単体、酸化物、各種化合物（炭酸塩等）等を用いることができる。また、目的とする複合酸化物の構成原子を二種以上含む原料物質を使用してもよい。

[0044] これらの原料物質は、目的とする複合酸化物の金属成分比と同様の金属比となるように混合して、そのまま用いることが可能であるが、特に、これらの原料物質を混合し焼成して用いることが好ましい。焼成物とすることにより、後述する気相蒸着の際に原料物質の取り扱いが容易となる。

[0045] 原料物質の焼成条件については特に限定はなく、上記した一般式で表される複合酸化物の結晶が形成される高温度で焼成しても良く、或いは、上記複合酸化物の結

晶が生じることが無く、仮焼体が形成される程度の比較的低温で焼成してもよい。焼成手段は特に限定されず、電気加熱炉、ガス加熱炉等任意の手段を採用できる。焼成雰囲気は、通常、酸素気流中、空気中等の酸化性雰囲気中とすればよいが、不活性雰囲気中で焼成することも可能である。

- [0046] 気相蒸着法としては、特に限定的ではなく、上記した原料物質を用いて基板上に酸化物薄膜を形成できる方法であればよい。例えば、パルスレーザー堆積法、スパッタリング法、真空蒸着法、イオンプレーティング法、プラズマアシスト蒸着法、イオンアシスト蒸着法、反応性蒸着法、レーザーアブレーション法等の物理蒸着法を好適に採用できる。これらの方法の中で、多元素を含む複合酸化物を蒸着させる際に組成変動を生じ難い点で、パルスレーザー堆積法が好ましい。
- [0047] 複合酸化物を堆積させる際に、400〜600℃程度に基板を加熱してもよく、或いは、室温のままでもよい。加熱して堆積させる場合には、該複合酸化物が基板上に生成するため、通常、熱処理を行う必要はない。室温で基板上に複合酸化物を堆積させた状態では、該複合酸化物は、結晶化の程度が非常に低く、良好な熱電変換性能を発揮できないことがあるが、熱処理を行うことによって、該複合酸化物の結晶化が進行して良好な熱電変換性能を発揮できるようになる。
- [0048] 熱処理温度については、例えば、600〜740℃程度とすればよい。この温度範囲で熱処理を行うことによって、複合酸化物薄膜の結晶化が進行して、良好な熱電変換性能を有するものとなる。熱処理温度が低すぎる場合には、結晶化が十分に進行せず、熱電変換性能が劣るものとなるので好ましくない。一方、熱処理温度が高すぎると、別の相が出現して、やはり熱電変換性能が低下するので好ましくない。
- [0049] 熱処理時の雰囲気については、通常、大気中や酸素を5%程度以上含む雰囲気下などの酸化性雰囲気とすればよい。この時の圧力は、特に限定的ではなく、減圧、大気圧、加圧のいずれでも良く、例えば、 10^{-3} Pa〜2MPa程度の範囲とすることができる。
- [0050] 熱処理時間は、被処理物の大きさや複合酸化物薄膜の厚さなどによって異なるが、該複合酸化物薄膜の結晶化が十分に進行するまで熱処理を行えばよく、通常、3分〜10時間程度、好ましくは1〜3時間程度程度の熱処理時間とすればよい。

[0051] この様な方法によって、目的とする複合酸化物の薄膜を形成することができる。

[0052] (ii) スピンコート法:

次に、溶液原料を用いる複合酸化物薄膜の製造方法として、スピンコート法について詳細に記載する。

[0053] 溶液原料としては、目的とする複合酸化物の構成金属元素を含む原料物質を溶解した溶液を用いればよい。原料物質は焼成により酸化物を形成し得るものであれば特に限定されず、金属単体、酸化物、各種化合物(塩化物、炭酸塩、硝酸塩、水酸化物、アルコキシド化合物等)等を使用できる。

[0054] 溶媒としては、水や、トルエン、キシレン等の有機溶媒を用いることができる。原料物質の濃度については、特に限定的ではないが、例えば、例えば0.01〜1モル/l程度とすればよく、目的とする複合酸化物の金属成分と同様の比率で金属成分を含有する溶液を用いればよい。

[0055] まず、この様な溶液原料を、高速回転している基板上に少量ずつ滴下する。回転による遠心力で溶液が均一に基板面に拡がり、溶媒を蒸発させることにより、目的とする複合酸化物薄膜の前駆体が形成される。基板の回転速度は特に限定されないが、溶液粘度や製造する膜厚によって、適宜回転速度を決めればよい。

[0056] 次いで、この前駆体を空気中で熱処理することによって、複合酸化物薄膜が形成される。熱処理条件は、目的とする複合酸化物が形成される条件であればよく特に限定されないが、一般的には、300〜500℃程度で1〜10時間程度加熱して溶媒を除去し、その後500〜1000℃程度で1〜20時間程度加熱することによって、目的とする複合酸化物の多結晶体の薄膜が形成される。

[0057] (iii) エアロゾル堆積法:

エアロゾル堆積法では、目的とする複合酸化物の微粉末を搬送ガスと共に基板上に吹き付けることによって、複合酸化物の被膜を形成できる。

[0058] 複合酸化物の微粉末は、通常、目的とする複合酸化物の金属成分比と同様の金属比となるように原料物質を混合し、酸素含有雰囲気中で焼成し、必要に応じて粉砕することによって得ることができる。複合酸化物の平均粒径は、例えば、0.5〜5 μ m程度とすればよい。

[0059] 搬送ガスとしては、例えば、窒素ガス、Heガス等を用いることができる。この様な搬送ガスを用い、圧力10Pa～8kPa程度の減圧チャンバー内で、ガス流量5～10L／分程度、ノズル基板間距離10～30mm程度で、複合酸化物粉末を基板に吹き付けることによって、複合酸化物の被膜を形成することができる。このとき、基板は加熱する必要は必ずしも無いが、200～600℃程度に加熱しておく、と、形成される被膜の密着性を向上させることができる。

[0060] また被膜後、加熱の必要はないが、必要に応じて、酸素含有雰囲気中で、膜厚に応じて200～700℃程度で10分～4時間程度加熱することによって、形成される被膜の結晶性をより向上させることができる。

[0061] (iv) 単結晶薄膜形成法：

次に、複合酸化物の単結晶薄膜を形成する方法について説明する。
この方法では、目的とする複合酸化物の元素成分比率と同様の元素成分比率となるように原料物質を混合し、基板上で加熱して溶融させた後、徐々に冷却することによって単結晶薄膜を形成することができる。原料物質としては、原料混合物を加熱した際に均一な溶融物を形成し得るものであれば特に限定されず、元素単体、酸化物、各種化合物(炭酸塩等)等を使用できる。また目的とする複合酸化物の構成元素を二種以上含む化合物を使用しても良い。

[0062] 具体的な単結晶薄膜形成方法としては、溶融した原料混合物が均一な溶液状態となる条件で加熱した後、冷却すればよい。加熱時間については特に限定はなく、均一な溶液状態となるまで加熱すればよい。加熱手段は特に限定されず、電気加熱炉、ガス加熱炉等任意の手段を採用できる。溶融時の雰囲気は、通常、酸素気流中、空気中等の酸化性雰囲気中とすればよいが、原料物質が十分量の酸素を含む場合には、例えば、不活性雰囲気中で溶融することも可能である。

[0063] 冷却方法についても特に限定的ではなく、溶液状態の原料の全体を冷却しても良く、或いは、溶融した原料物質の入った容器に冷却した基板を浸漬して、その面上に単結晶を析出させてもよい。

[0064] 冷却速度については、特に限定的ではないが、速度が大きくなると基板上に多数の結晶が析出して、いわゆる多結晶薄膜が形成されるので、単結晶薄膜を製造する

ためには、ゆっくりと冷却することが好ましい。例えば、毎時50℃程度以下の冷却速度とすればよい。

[0065] また、原料混合物を直接溶融することに代えて、原料混合物に、溶融物の融点調整などを目的として、その他の成分を添加し、この混合物を加熱して溶融させても良い。この様な複合酸化物の金属源となる物質以外の添加成分(フラックス成分)を加えて溶融させる方法は、いわゆる“フラックス法”と称される方法である。この方法によれば、原料混合物に含まれるフラックス成分の一部が加熱により溶融し、その化学変化、溶解作用などによって、原料物質全体が溶液状態となり、原料混合物を直接冷却する方法と比べて低い温度で溶融物を得ることができる。そして、溶液状態の原料物質の冷却速度を適度に制御して冷却することによって、冷却に伴う過飽和状態を用いて目的とする単結晶を成長させることができる。この冷却過程においては、原料物質が溶融して形成された溶液と相平衡にある固相組成の複合酸化物の単結晶が成長する。よって、互いに平衡状態にある融液相と固相(単結晶)の組成の関係に基づいて、目的とする複合酸化物単結晶の組成に対応する原料混合物における各原料物質の割合を決めることができる。

[0066] その際、原料中に含まれるフラックス成分は融液成分として残り、成長する単結晶の構成成分には含まれない。

[0067] この様なフラックス成分としては、原料物質と比べて低融点であり、形成される融液中に原料物質を十分に溶解することができ、しかも目的とする複合酸化物の特性を阻害しない物質から適宜選択して用いればよい。例えば、アルカリ金属化合物、ホウ素含有化合物などを好適に用いることができる。

[0068] アルカリ金属化合物の具体例としては、塩化リチウム(LiCl)、塩化ナトリウム(NaCl)、塩化カリウム(KCl)などのアルカリ金属塩化物、これらの水和物;炭酸リチウム(Li_2CO_3)、炭酸ナトリウム(Na_2CO_3)、炭酸カリウム(K_2CO_3)などのアルカリ金属炭酸塩などを挙げることができる。ホウ素含有化合物の具体例としては、ホウ酸(B_2O_3)などを挙げることができる。これらの任意の添加成分についても、それぞれを単独あるいは二種以上混合して用いることができる。

[0069] これらのフラックス成分の量については特に限定的ではなく、形成される融液中へ

の原料物質の溶解度を考慮して、できるだけ高濃度の原料物質を含む溶液が形成されるように、実際の加熱温度に応じて使用量を決めればよい。

[0070] 原料混合物を溶融させる方法については特に限定的ではなく、溶融した原料混合物が基板上で均一な溶液状態となる条件で加熱すれば良い。実際の加熱温度は、使用するフラックス成分の種類などによって異なるが、例えば、800〜1000℃程度の温度範囲において、20時間〜40時間程度加熱して溶融させれば良い。

[0071] 加熱手段は特に限定されず、電気加熱炉、ガス加熱炉等任意の手段を採用できる。溶融時の雰囲気は、通常、酸素気流中、空気中等の酸化性雰囲気中とすればよいが、原料物質が十分量の酸素を含む場合には、例えば、不活性雰囲気中で溶融させることも可能である。

[0072] 冷却速度については、特に限定的ではないが、冷却速度が速いと多結晶薄膜が形成され、冷却速度を遅くするほど単結晶薄膜を得やすい。例えば、毎時50℃程度以下の速度で冷却すれば単結晶薄膜を製造することができる。

[0073] 形成される複合酸化物単結晶薄膜の大きさ、収率などは、原料物質の種類と組成比、溶融成分の組成、冷却速度などによって変わり得るが、例えば毎時50℃程度以下の冷却速度で試料が固化するまで冷却する場合には、幅0.5mm程度以上、厚さ0.5mm程度以上、長5mm程度以上の針状又は板状の形状を有する単結晶を得ることができる。

[0074] 次いで、冷却により形成された固化物から、目的とする複合酸化物単結晶以外の成分を除去することによって、基板面に付着した状態で目的とする複合酸化物の単結晶薄膜を得ることができる。

[0075] 目的物以外の成分を除去する方法としては、複合酸化物単結晶に付着している水溶性の成分、例えば、塩化物などについては、蒸留水による洗浄と濾過を繰り返して行い、さらに必要に応じてエタノール洗浄などを併用することによって、目的生成物から除去することができる。

[0076] (4) 熱電変換素子：

基板上に形成されたp型熱電変換材料薄膜とn型熱電変換材料薄膜は、それぞれの一端同士を電氣的に接続させることによって、熱電変換素子とすることができる。

- [0077] この場合、p型熱電変換材料とn型熱電変換材料の熱起電力の絶対値の和が、例えば、293〜1073K(絶対温度)の範囲の全ての温度において $60\mu\text{V/K}$ 程度以上、好ましくは $100\mu\text{V/K}$ 程度以上となるように熱電変換材料を組合せて用いることが好ましい。また、両材料とも、293〜1073K(絶対温度)の範囲の全ての温度において電気抵抗率が $100\text{m}\Omega\text{cm}$ 程度以下、好ましくは $50\text{m}\Omega\text{cm}$ 程度以下、より好ましくは $10\text{m}\Omega\text{cm}$ 程度以下であることが望ましい。
- [0078] 電氣的に接続させる方法については特に限定はなく、p型熱電変換材料薄膜の一端とn型熱電変換材料薄膜の一端を直接接触させて接続してもよく、或いは、p型熱電変換材料薄膜の一端とn型熱電変換材料薄膜の一端を、導電性材料を介して接続しても良い。
- [0079] p型熱電変換材料の一端とn型熱電変換材料の一端を電氣的に接続するための具体的な方法については、特に限定はないが、接合した際に、293〜1073K(絶対温度)の全ての範囲において素子の熱起電力が $60\mu\text{V/K}$ 以上、電気抵抗が $1\text{K}\Omega$ 以下の特性を維持できる方法が好ましい。
- [0080] 尚、接続によって生じる電気抵抗は、接続方法や接合部分の面積、使用する導電性材料の種類、大きさなどに依存するが、一般に、熱電変換素子全体の抵抗に占める接合部の抵抗の割合が50%程度以下となるように、接続条件を設定することが好ましく、10%程度以下となるように設定することがより好ましく、5%程度以下となるように設定することが更に好ましい。
- [0081] 以下、図面を参照して、電氣的に接続させる方法の具体例を説明する。各図面では、基板上においてp型熱電変換材料薄膜の一端とn型熱電変換材料薄膜の一端を電氣的に接続して得られる熱電変換素子の正面図と平面図を示す。
- [0082] 図1(a)〜(c)は、基板1の同一平面上に形成したp型熱電変換材料薄膜2の一端とn型熱電変換材料薄膜3の一端を直接接触させた構造の熱電変換素子を示すものである。
- [0083] 図1(d)及び(e)は、薄膜の接触部分において、一方の材料が他方の材料の一部を被覆する状態で接触させたものである。この様な構成の素子によれば、より良好な電氣的接続を得ることができる。

- [0084] 図2(a)ー(c)は、基板1上に形成したp型熱電変換材料薄膜2の一端とn型熱電変換材料薄膜3の一端を、導電性材料4を介して接続させた構造の熱電変換素子を示すものである。
- [0085] 導電性材料としては、p型熱電変換材料とn型熱電変換材料を低抵抗で接続できるものであれば、特に限定なく使用できる。例えば、金属ペースト、ハンダ、導電性セラミックスなどを用いることができる。特に、1073K程度の高温においても熔融することなく、化学的に安定であり、低抵抗を維持できるものとして、金、銀、白金などの貴金属ペースト、導電性セラミックスなどを用いることが好ましい。また、スパッタリングなどの気相蒸着法によって、これらの導電性材料の薄膜を形成してもよい。
- [0086] 図3は、基板1上において、p型熱電変換材料薄膜2の一端とn型熱電変換材料薄膜3の一端を直接接触させ、その接触部分を、更に、導電性材料4で被覆した構造の熱電変換素子の構造を示す図面である。この様な構造の素子によれば、両薄膜に接触部分においてより良好な電氣的接続を確保することができる。
- [0087] 図4(a)ー(c)は、基板の同一面上にp型熱電変換材料薄膜2とn型熱電変換材料薄膜3を接触させることなく形成し、該基板の端面において両薄膜を電氣的に接続させた構造の熱電変換素子を示す図面である。これらの内で、図4の(a)は、基板の端面において、両薄膜を直接接続させた構造の素子を示すものであり、図4の(b)は、基板の端面において、導電性材料4を介して両薄膜を接触させた構造の熱電変換素子を示すものである。図4の(c)は、基板の端面に導電性材料4の薄膜を形成し、p型熱電変換材料薄膜2とn型熱電変換材料薄膜3を、基板の角部分で該導電性材料4に接触させることによって、両薄膜を電氣的に接続した構造の素子を示すものである。この場合、導電性材料4としては、図2に示した素子と同様に金属ペースト、ハンダ、導電性セラミックス等を用いることができ、更に、蒸着法で形成した導電性膜でも良い。この場合、基板の端面に形成する導電性材料として、p型熱電変換材料薄膜又はn型熱電変換材料薄膜を用いてもよく、p型熱電変換材料薄膜とn型熱電変換材料薄膜の全体又は一部分が積層した状態の薄膜であっても良い。
- [0088] 更に、図4(a)に示す基板の端面で電氣的に接続させた構造の熱電変換素子では、両薄膜を直接接触させ、その接触部分を導電性材料で被覆した構造や、基板端面

において両材料の一部又は全部を積層する構造とすることによって、より良好な電氣的接続を確保することができる。

[0089] 尚、上記した図1ー図4に示す各熱電変換素子において、図5に示すような切り込み部分の入った基板を用い、p型熱電変換材料薄膜とn型熱電変換材料薄膜を、切り込み部分の両側に形成することにより、素子全体の熱伝導をより低減することができる。

[0090] 熱電変換モジュール

本発明の熱電変換モジュールは、上記した熱電変換素子を複数個用い、一個の熱電変換素子のp型熱電変換材料の未接合の端部を、他の熱電変換素子のn型熱電変換材料の未接合の端部に接続する方法で複数の熱電変換素子を直列に接続したものである。

[0091] 具体的な接続方法については、特に限定的ではなく、例えば、上記した熱電変換素子における熱電変換材料の接続方法と同様の方法を適用できる。

[0092] 図6に、熱電変換モジュールの一例の概略図を示す。この熱電変換モジュールは、図1(a)に示した、同一平面上に形成したp型熱電変換材料薄膜2の一端とn型熱電変換材料薄膜3の一端を直接接触させた構造の熱電変換素子を用い、そのp型熱電変換材料2の未接合の端部と、n型熱電変換材料3の未接合の端部とを導電性材料5を介して接合する方法で、複数の熱電変換材料を直列に接続したものである。一つのモジュールに用いる熱電変換素子の数は限定されず、必要とする電力により任意に選択することができる。

[0093] 熱電変換素子を接合するために用いる導電性材料5としては、図2に示す熱電変換素子を作製する場合と同様に、貴金属ペースト、ハンダ、導電性セラミックスなどを用いることができる。導電性セラミックスとしては、p型熱電変換材料又はn型熱電変換材料と同様の複合酸化物を用いることもできる。

[0094] また、異なる基板上に形成した複数の熱電変換素子の未接合の端子同士を接続する方法だけでなく、同一の基板上に複数個の熱電変換素子を形成し、未接合の端部同士を電氣的に接続させても良い。この場合、上記した熱電変換材料の薄膜の形成方法を適用して、必要な数のp型熱電変換材料薄膜とn型熱電変換材料薄膜を同

一基板上に形成し、各素子の端部を接続することによって、簡単に熱電変換モジュールを得ることができる。

[0095] 本発明の熱電変換モジュールは、その一端を高温部に配置し、他端を低温部に配置することによって電圧を発生することができる。例えば、図6のモジュールでは、p型熱電変換材料薄膜とn型熱電変換材料薄膜を直接接触させた部分を高温部に配置し、他端を低温部に配置すればよい。

[0096] 更に、図7に斜視図として示すように、パイプ状の基板1を用い、その両面又は片面に、長さ方向と平行に、p型熱電変換材料2の薄膜とn型熱電変換材料3の薄膜を形成し、いずれか一方の開口部付近でp型熱電変換材料とn型熱電変換材料を電氣的に接続してパイプ状基板上に熱電変換素子を形成し、更に、この様な熱電変換素子をパイプ状基板上に複数形成して、該熱電変換素子の未接合の端部同士を接続することによってパイプ状の熱電変換モジュールとすることができる。この様なパイプ状の熱電変換モジュールでは、熱電変換モジュールの一方の開口部を高温側に配置し、他方の開口部を低温部側に配置すればよいが、更に、該パイプ中に高温ガスを通過させることによって、パイプの入口部と出口部のガスの温度差を利用して熱電発電を行うことも可能である。

[0097] 高温部の熱源としては、例えば、自動車エンジン、工場、火力乃至原子力発電所、ごみ焼却炉、マイクロタービン、ボイラー等から出る473K程度以上の高温熱や、太陽熱、熱湯、体温等293〜473K程度の低温熱等を用いることができる。

発明の効果

[0098] 本発明の熱電変換素子は、電気絶縁性基板上に、p型熱電変換材料とn型熱電変換材料が、薄膜状に形成されたものであり、各種の任意の形状の基板上に熱電変換素子を形成できることから、多様な形状の熱電変換素子とすることができる。その結果、電子回路への組み込みや微細部分での利用など各種の応用が可能となる。また、プラスチック基板を用いることもでき、各種フレキシブルデバイスへの応用も可能となる。

[0099] また、本発明の熱電変換素子は、特定の複合酸化物からなるp型熱電変換材料とn型熱電変換材料を組み合わせて用いるものであり、高い熱電変換効率と良好な電気

伝導性を有する熱電変換素子である。この様な熱電変換素子は、高い熱電変換効率を有し、且つ熱的安定性、化学的耐久性等に優れた熱電変換材料により構成されており、優れた性能を有する熱電変換素子である。

[0100] また、この様な熱電変換素子を用いた本発明の熱電変換モジュールは、熱耐久性に優れたものであり、高温部を1000K程度の高温から室温まで急冷しても、破損することがなく、発電特性も劣化し難いものである。

[0101] この様に、本発明の熱電変換モジュールは、小型で高い出力密度を有するばかりではなく、熱衝撃にも強いことから、工場やゴミ焼却炉、火力・原子力発電所のみならず、温度変化が激しい自動車への応用も可能である。

[0102] さらに473K程度以下の熱エネルギーからも発電が可能であり、熱電変換素子を高集積化できることから、熱源を装着することにより、携帯電話やノートパソコンなど移動機器用の充電が不要な電源としても利用することができる。

図面の簡単な説明

[0103] [図1]熱電変換素子の一例を示す平面図及び正面図。

[図2]熱電変換素子のその他の例を示す平面図及び正面図。

[図3]熱電変換素子のその他の例を示す平面図及び正面図。

[図4]熱電変換素子のその他の例を示す平面図及び正面図。

[図5]切り込み部分を有する熱電変換素子用基板の平面図。

[図6]パイプ状基板上に形成された熱電変換モジュールの斜視図。

[図7]熱電変換モジュールの一例を示す図面。

[図8]実施例1で得られた熱電変換素子の概略図。

[図9]実施例9～16で得られた熱電変換素子の概略図。

[図10]実施例17～24で得られた熱電変換素子の概略図。

[図11]実施例25～40で得られた熱電変換素子の概略図。

[図12]実施例41～48で得られた熱電変換素子の概略図。

[図13]実施例49～51で得られた熱電変換素子の概略図。

[図14]実施例1で得られた熱電変換素子の電気抵抗の温度依存性を示すグラフ。

符号の説明

- [0104] 1:基板、
2:p型熱電変換材料、
3:n型熱電変換材料、
4、5:導電性材料

発明を実施するための最良の形態

[0105] 以下、実施例を挙げて本発明を更に詳細に説明する。

[0106] 実施例1

以下の方法で、パルスレーザー堆積法に用いるターゲット材(焼結体)を作製した後、パルスレーザー堆積法によって熱電変換素子を作製した。

(1)ターゲット材の作製

(i)p型熱電変換材料用ターゲット材

酸化ビスマス(Bi_2O_3)、炭酸ストロンチウム(SrCO_3)及び酸化コバルト(Co_3O_4)を原料として用い、これらをBi:Sr:Co(原子比)=2:2:2となるように混合し、電気炉を用い大気中で800℃で10時間仮焼した後、加圧成型し、さらに850℃で20時間焼成して、直径2cm、厚さ3mmの円板状焼結体からなるp型熱電変換材料用ターゲット材を作製した。

(ii)n型熱電変換材料用ターゲット材

La源として硝酸ランタン($\text{La}_2(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$)、Bi源として硝酸ビスマス($\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$)、Ni源として硝酸ニッケル($\text{Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$)を用い、La:Bi:Ni(元素比)=0.9:0.1:1.0となる割合でこれらの原料を蒸留水に完全に溶解させ、アルミナるつぼ中で十分に攪拌混合した後、水分を蒸発させて乾固した。次いで、電気炉を用いて、析出物を空気中で600℃で10時間焼成して、硝酸塩を分解した。その後、焼成物を粉碎し、加圧成形後、300ml/分の酸素気流中で1000℃で20時間加熱して、直径2cm、厚さ3mmの円板状焼結体からなるn型熱電変換材料用ターゲット材を作製した。

(2)熱電変換素子の作製

上記した各ターゲット材を用い、8mm×8mm×1mmの石英ガラス板を基板として、アルゴン・フッ素(ArF)エキシマーレーザーを用いてパルスレーザー堆積法によりp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を順次堆積させた。この際、幅3

mm、長さ8mmで、長さ方向の一端部から2mmについては幅が5mmとなるL字形の開口部を有するマスクを用いて、L字型の短辺部分でp型熱電変換材料とn型熱電変換材料が重なり合うようにして、両材料を堆積させた。尚、基板を加熱することなく、室温において各薄膜を形成した。具体的な成膜条件は下記の通りである。

- ・レーザー:ArFエキシマレーザー
- ・レーザー出力:150mJ
- ・繰り返し周波数:5Hz
- ・圧力: 5×10^{-5} Torr
- ・ターゲット-基板間距離:3cm
- ・基板:石英ガラス
- ・基板温度:室温

上記した方法でp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を形成した後、大気雰囲気中、650℃で2時間熱処理して、熱電変換素子を作製した。

[0107] 得られた熱電変換素子は、図1(d)に示す素子と同様の形状を有するものであり、長さ8mm、幅3mm、膜厚1〜2 μ mのp型熱電変換材料の薄膜とn型熱電変換材料の薄膜が2mmの間隔で形成され、各薄膜の端部2mmの部分で、各薄膜が重なり合うことによって、電気的に接続された状態となっている。この熱電変換素子の概略図を図8に示す。

[0108] 実施例2〜8

下記表1に示す組成のp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を形成すること以外は、実施例1と同様にして、実施例2〜8の各熱電変換素子を作製した。尚、下記表1〜表3において、eは8〜10の範囲の値、kは8〜10の範囲の値、rは2.7〜3.3の範囲の値、wは3.6〜4.4の範囲の値、r'は2.8〜3.2の範囲の値である。

[0109] 実施例9〜16

表1に示す各組成の熱電変換材料を用い、8mm×8mm×1mmの石英ガラス板を基板として、8mm×8mmの面上の一辺側から幅1mmの範囲に、長さ8mm、厚さ0.5 μ mの白金薄膜をスパッタリングによって形成した。スパッタリングガスとしては、

アルゴンを用い、真空中、室温において白金薄膜を形成した。

[0110] 次に、形成された白金薄膜の帯に垂直な一辺の縁から幅3mmの範囲に、長さ8mmのp型熱電変換材料の薄膜を堆積させ、更に、p型熱電変換材料の薄膜を堆積させた反対側の辺の縁から3mmの範囲にn型熱電変換材料の薄膜を堆積させた。各薄膜は、実施例1と同様にして、パルスレーザー堆積法によって堆積させた。次いで、実施例1と同様の条件で熱処理を行って熱電変換素子を作製した。

[0111] 得られた素子は、図2(c)に示す素子と同様の形状であり、p型熱電変換材料の薄膜とn型熱電変換材料の薄膜が、それぞれ3mm幅、8mm長、1〜2 μ m厚で、2mmの間隔をあけて形成され、各薄膜の一部が白金薄膜と重なることによって、電氣的に接続された状態となっている。この熱電変換素子の概略図を図9に示す。

[0112] 実施例17〜24

幅3mm、長さ8mmで、長さ方向の一端部から2mmの幅が4mmとなるL字形の開口部を有するマスクを用いて、8mm×8mm×1mmの石英ガラス基板上に、p型熱電変換材料とn型熱電変換材料の各薄膜を堆積させた。この際、各材料については、ガラス基板の中間部でL字形の堆積物の短辺の先端部分が接触するようにして堆積させた。p型熱電変換材料とn型熱電変換材料としては、表1に示す組成の材料を用い、実施例1と同様のパルスレーザー堆積法によって堆積させた。次いで、実施例1と同様にして熱処理を行って熱電変換素子を作製した。

[0113] 得られた素子は、図1(a)に示す素子と同様の形状であり、p型熱電変換材料の薄膜とn型熱電変換材料の薄膜がそれぞれ3mm幅、8mm長、1〜2 μ m厚で、2mmの間隔をあけて形成され、L字形の短辺の先端部で両薄膜が線状に接触することによって、電氣的に接続された状態となっている。この熱電変換素子の概略図を図10に示す。

[0114] 実施例25〜32

8mm×8mm×1mmの石英ガラス基板の一端面(8mm×1mmの面)に、p型熱電変換材料を堆積させた後、その上にn型熱電変換材料を堆積させた。

[0115] 次いで、石英ガラス基板の8mm×8mmの面に、一辺の縁から幅3mmの範囲に、長さ8mmのp型熱電変換材料の薄膜を堆積させ、更に、p型熱電変換材料を形成し

た側と反対側の辺の縁から幅3mmの範囲に長さ8mmのn型熱電変換材料の薄膜を堆積させた。この場合、p型熱電変換材料薄膜とn型熱電変換材料薄膜は、いずれも、長さ3mmの辺が、基板の端面に形成した熱電変換材料と接触するように堆積させた。p型熱電変換材料とn型熱電変換材料としては、表2に示す組成の材料を用い、実施例1と同様のパルスレーザー堆積法によって堆積させた。次いで、実施例1と同様の条件で、熱処理を行って熱電変換素子を作製した。

[0116] 得られた素子は、図4(c)に示す素子と同様の形状であり、p型熱電変換材料の薄膜とn型熱電変換材料の薄膜が、それぞれ3mm幅、8mm長、 $1\sim 2\mu\text{m}$ 厚で、2mmの間隔をあけて形成され、基板の端面に形成された熱電変換材料(p型熱電変換材料とn型熱電変換材料の積層膜)からなる導電性膜と基板の角で接触することによって、電氣的に接続された状態となっている。この熱電変換素子の概略図を図11に示す。

[0117] 実施例33～40

8mm×8mm×1mmの石英ガラス基板の一端面(8mm×1mmの面)に、実施例9～16と同様にして白金を蒸着させた。

[0118] 次いで、石英ガラス基板の8mm×8mmの面に、一辺の縁から幅3mmの範囲に、長さ8mmのp型熱電変換材料の薄膜を堆積させ、更に、p型熱電変換材料を形成した側と反対側の辺の縁から幅3mmの範囲に長さ8mmのn型熱電変換材料の薄膜を堆積させた。この場合、p型熱電変換材料薄膜とn型熱電変換材料薄膜については、いずれも長さ3mmの辺が、基板の端面に形成した白金薄膜と接触するようにして堆積させた。p型熱電変換材料とn型熱電変換材料としては、表2に示す組成の材料を用い、実施例1と同様のパルスレーザー堆積法によって堆積させた。次いで、実施例1と同様の条件で、熱処理を行って熱電変換素子を作製した。

[0119] 得られた素子は、図4(c)に示す素子と同様の形状であり、p型熱電変換材料の薄膜とn型熱電変換材料の薄膜が、それぞれ3mm幅、8mm長、 $1\sim 2\mu\text{m}$ 厚で、2mmの間隔をあけて形成され、基板の端面に形成された白金薄膜からなる導電性膜と基板の角で接触することによって、電氣的に接続された状態となっている。この熱電変換素子は、図11に示すものと同様の構造である。

[0120] 実施例41～48

8mm×8mm×1mmの石英ガラス基板の一端面(8mm×1mmの面)に、一端から4mmの長さでp型熱電変換材料を堆積させ、更に、同一の端面の反対端から4mmの長さでn型熱電変換材料を堆積させた。この場合、p型熱電変換材料とn型熱電変換材料は、長さ1mmの辺で線状に接触した状態であった。

[0121] 次いで、石英ガラス基板の8mm×8mmの面に、一辺の縁から幅3mmの範囲に、長さ8mmのp型熱電変換材料の薄膜を堆積させ、更に、p型熱電変換材料を形成した側と反対側の辺の縁から幅3mmの範囲に長さ8mmのn型熱電変換材料の薄膜を堆積させた。この場合、p型熱電変換材料薄膜については、長さ3mmの辺が基板の端面に形成されたp型熱電変換材料と基板の角部分で接触する状態となるように堆積させ、n型熱電変換材料薄膜については、長さ3mmの辺が基板の端面に形成したn型熱電変換材料と基板の角部分で接触する状態となるように堆積させた。p型熱電変換材料とn型熱電変換材料としては、表2に示す組成の材料を用い、実施例1と同様のパルスレーザー堆積法によって堆積させた。次いで、実施例1と同様の条件で、熱処理を行って熱電変換素子を作製した。

[0122] 得られた素子は、図4(a)に示す素子と同様の形状であり、p型熱電変換材料の薄膜とn型熱電変換材料の薄膜が、それぞれ3mm幅、8mm長、1～2μm厚で、2mmの間隔をあけて形成され、基板の端面に形成された熱電変換材料の薄膜と基板の角部分で接触することによって、電気的に接続された状態となっている。この熱電変換素子の概略図を図12に示す。

[0123] 実施例49～51

長さ8mm、幅3mm、厚さ1mmの石英ガラス基板の短尺の一端面(3mm×1mmの面)に白金、 $\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e$ 又は $\text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$ の薄膜からなる導電性膜を堆積させた。白金の堆積方法は、実施例9～16と同様の方法であり、 $\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e$ と $\text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$ の薄膜の堆積方法は実施例1と同様である。

[0124] 次いで、ガラス基板の8mm×3mm面の一方に $\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e$ の組成を有するp型熱電変換材料を堆積させ、反対面に $\text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$ の組成を有するn型熱電変換材料を堆積させた。この場合、各薄膜の堆積方法は実施例1と同様である。次いで、実施

例1と同様の条件で、熱処理を行って熱電変換素子を作製した。

- [0125] 得られた素子は、p型熱電変換材料の薄膜とn型熱電変換材料の薄膜が、基板の端面に形成された白金、 $\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e$ 又は $\text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$ からなる導電性膜と基板の角部分で接触することによって、電氣的に接続された状態となっている。この熱電変換素子の概略図を図13に示す。

[0126] 特性試験例1

実施例1で得られた熱電変換素子のp型熱電変換材料とn型熱電変換材料について、下記の方法で室温におけるゼーベック係数を測定した。

- [0127] まず、二対のK型熱電対の一方にヒーターを巻いて加熱し、二対それぞれを材料の両端に同時に接触させ、その時の温度と発生電圧を測定した。そして、この発生電圧を二対の熱電対の温度差で除することにより、各熱電変換材料のゼーベック係数を得た。その結果p型熱電変換材料部分のゼーベック係数は $85 \mu\text{V}/\text{K}$ であり、n型熱電変換材料部分のゼーベック係数は $-13 \mu\text{V}/\text{K}$ であった。

- [0128] 各実施例で得られた熱電変換素子について、同様の方法でゼーベック係数を測定したところ、p型熱電変換材料部分のゼーベック係数は $60\sim 120 \mu\text{V}/\text{K}$ であり、n型熱電変換材料部分のゼーベック係数は、 $-5\sim -25 \mu\text{V}/\text{K}$ であった。

- [0129] また、各熱電変換素子について、p型熱電変換材料とn型熱電変換材料を電氣的に接続している側の反対側の両端部に銀ペーストを用いて白金線を接着させた。この白金線を電圧計に接続し、素子を電気炉に入れて、 500°C まで加熱した。エアポンプを用いて熱電変換素子の白金線を接着した側を空冷し、高温側と $30\sim 40^\circ\text{C}$ の温度差を生じさせ、その時の発生電圧(開放電圧)を測定した。

- [0130] 実施例1で得られた熱電変換素子では、発生電圧(開放電圧)は 3.4mV であった。各実施例で得られた熱電変換素子の発生電圧(開放電圧)を下記表1～表3に示す。

- [0131] また、実施例1で得られた熱電変換素子の電気抵抗の温度依存性を示すグラフを図14に示す。電気抵抗率は室温～ 650°C において $350\sim 1000 \Omega$ であった。

- [0132] p型熱電変換材料とn型熱電変換材料を電氣的に接続している側を高温側として 500°C まで加熱し、他端を空冷して 38°C の温度差を生じさせた場合、実施例1で得ら

れた熱電変換素子は8.3nWの発電出力を示した。各実施例で得られた熱電変換素子について、同様の方法で発電出力を求めた結果も表1～表3に示す。

[0133] [表1]

実施例	p 熱電材料組成 / n 型熱電材料組成	開放電圧(mV) 高温側 500℃ 温度差 30～40℃	電気 抵抗(Ω) 500℃	出力 (nW) 高温側 500℃ 温度差 30～40℃
1	$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_k / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	3.4	350	8.3
2	$\text{Bi}_{2.2}\text{Sr}_{2.2}\text{Co}_2\text{O}_k / \text{LaNiO}_r$	3.2	360	7.1
3	$\text{Bi}_{1.8}\text{Pb}_{0.4}\text{Sr}_{1.8}\text{Ca}_{0.4}\text{Co}_2\text{O}_k / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	3.1	365	6.6
4	$\text{Bi}_2\text{Ba}_2\text{Co}_2\text{O}_k / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	3.3	355	7.7
5	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	2.9	490	4.3
6	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{LaNiO}_r$	2.6	510	3.3
7	$\text{Ca}_{3.3}\text{Na}_{0.3}\text{Co}_4\text{O}_e / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	2.7	520	3.5
8	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	2.9	530	4.0
9	$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_k / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	3.1	370	6.5
10	$\text{Bi}_{2.2}\text{Sr}_{2.2}\text{Co}_2\text{O}_k / \text{LaNiO}_r$	3.2	375	6.8
11	$\text{Bi}_{1.8}\text{Pb}_{0.4}\text{Sr}_{1.8}\text{Ca}_{0.4}\text{Co}_2\text{O}_k / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	3.0	380	5.9
12	$\text{Bi}_2\text{Ba}_2\text{Co}_2\text{O}_k / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	3.2	375	6.8
13	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	2.8	530	3.7
14	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{LaNiO}_r$	2.8	550	3.6
15	$\text{Ca}_{3.3}\text{Na}_{0.3}\text{Co}_4\text{O}_e / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	2.7	530	3.4
16	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	2.9	540	3.9
17	$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_k / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	3.1	370	6.5
18	$\text{Bi}_{2.2}\text{Sr}_{2.2}\text{Co}_2\text{O}_k / \text{LaNiO}_r$	3.3	370	7.4
19	$\text{Bi}_{1.8}\text{Pb}_{0.4}\text{Sr}_{1.8}\text{Ca}_{0.4}\text{Co}_2\text{O}_k / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	3.0	360	6.3
20	$\text{Bi}_2\text{Ba}_2\text{Co}_2\text{O}_k / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	3.1	380	6.3
21	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	3.0	510	4.4
22	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{LaNiO}_r$	2.9	520	4.0
23	$\text{Ca}_{3.3}\text{Na}_{0.3}\text{Co}_4\text{O}_e / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	2.9	500	4.2
24	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	2.7	530	3.4

[0134] [表2]

実施例	p 型熱電材料組成／n 型熱電材料組成	開放電圧(mV)	電気	出力 (nW)
		高温側 500℃	抵抗(Ω)	高温側 500℃
		温度差 30～40℃	500℃	温度差 30～40℃
25	$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_k / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	2.9	390	5.4
26	$\text{Bi}_{2.2}\text{Sr}_{2.2}\text{Co}_2\text{O}_k / \text{LaNiO}_r$	3.0	370	6.1
27	$\text{Bi}_{1.8}\text{Pb}_{0.4}\text{Sr}_{1.8}\text{Ca}_{0.4}\text{Co}_2\text{O}_k / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	3.2	385	6.6
28	$\text{Bi}_2\text{Ba}_2\text{Co}_2\text{O}_k / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	3.1	390	6.2
29	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	2.9	560	3.8
30	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{LaNiO}_r$	2.7	550	3.3
31	$\text{Ca}_{3.3}\text{Na}_{0.3}\text{Co}_4\text{O}_e / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	2.8	550	3.6
32	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	2.8	540	3.6
33	$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_k / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	3.1	375	6.4
34	$\text{Bi}_{2.2}\text{Sr}_{2.2}\text{Co}_2\text{O}_k / \text{LaNiO}_r$	3.3	390	7.0
35	$\text{Bi}_{1.8}\text{Pb}_{0.4}\text{Sr}_{1.8}\text{Ca}_{0.4}\text{Co}_2\text{O}_k / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	3.0	380	5.9
36	$\text{Bi}_2\text{Ba}_2\text{Co}_2\text{O}_k / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	3.1	375	6.4
37	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	2.9	520	4.0
38	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{LaNiO}_r$	2.8	550	3.6
39	$\text{Ca}_{3.3}\text{Na}_{0.3}\text{Co}_4\text{O}_e / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	2.9	570	3.7
40	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	2.7	555	3.3
41	$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_k / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	2.9	400	5.3
42	$\text{Bi}_{2.2}\text{Sr}_{2.2}\text{Co}_2\text{O}_k / \text{LaNiO}_r$	3.1	405	5.9
43	$\text{Bi}_{1.8}\text{Pb}_{0.4}\text{Sr}_{1.8}\text{Ca}_{0.4}\text{Co}_2\text{O}_k / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	3.2	390	6.6
44	$\text{Bi}_2\text{Ba}_2\text{Co}_2\text{O}_k / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	3.0	385	5.8
45	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	3.1	530	4.5
46	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{LaNiO}_r$	2.9	520	4.0
47	$\text{Ca}_{3.3}\text{Na}_{0.3}\text{Co}_4\text{O}_e / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_r$	2.7	525	3.5
48	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	2.8	560	3.5

[0135] [表3]

実施例	導電性膜	p 型熱電材料組成／n 型熱電材料組成	開放電圧(mV)	電気	出力 (nW)
			高温側 500℃	抵抗(Ω)	高温側
			温度差 30～40℃	500℃	500℃ 温度差 30～40℃
49	Pt	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	2.8	490	4.0
50	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e$	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	3.2	540	4.7
51	$\text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	3.0	500	4.5

[0136] 実施例52

以下の方法で、スパッタリング法に用いるターゲットを作製した後、スパッタリング法

によって、熱電変換素子を作製した。

[0137] (1) ターゲットの作製

(i) p型熱電変換材料用ターゲット

酸化ビスマス(Bi_2O_3)、炭酸ストロンチウム(SrCO_3)及び酸化コバルト(Co_3O_4)を原料として用い、これらをBi:Sr:Co(原子比)=2:2:2となるように混合し、電気炉を用い大気中で800°Cで10時間仮焼した後、加圧成型し、さらに850°Cで20時間焼成した。得られた粉末を、銅プレート上に直径10cm、厚さ2mmに敷き詰めてp型熱電変換材料用ターゲットを作製した。

(ii) n型熱電変換材料用ターゲット

La源として硝酸ランタン($\text{La}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$)、Bi源として硝酸ビスマス($\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$)、Ni源として硝酸ニッケル($\text{Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$)を用い、La:Bi:Ni(元素比)=0.9:0.1:1.0となる割合でこれらの原料を蒸留水に完全に溶解させ、アルミナるつぼ中で十分に攪拌混合した後、水分を蒸発させて乾固した。次いで、電気炉を用いて、析出物を空気中で600°Cで10時間焼成して、硝酸塩を分解した。その後、焼成物を粉砕し、加圧成形後、300ml/分の酸素気流中で1000°Cで20時間加熱した。得られた粉末を、銅プレート上に直径10cm、厚さ2mmに敷き詰めてn型熱電変換材料用ターゲットを作製した。

[0138] (2) 熱電変換素子の作製

上記した各ターゲットを用い、8mm×8mm×0.5mmのポリイミドフィルムを基板として、RFスパッタリング法によりp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を順次堆積させた。この際、幅3mm、長さ8mmで、長さ方向の一端部から2mmについては幅が5mmとなるL字形の開口部を有するマスクを用いて、L字型の短辺部分でp型熱電変換材料とn型熱電変換材料が重なり合うようにして、両材料を堆積させた。尚、基板加熱は行わず、プラズマによる温度上昇は260°C以下となるように制御した。具体的な成膜条件は下記の通りである。

- ・スパッタリングガス:Ar
- ・RF電力:50〜200W
- ・基板:ポリイミドフィルム

上記した方法でp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を形成した。

- [0139] 得られた熱電変換素子は、図1(d)に示す素子と同様の形状を有するものであり、長さ8mm、幅3mm、膜厚1〜2 μ mのp型熱電変換材料の薄膜とn型熱電変換材料の薄膜が2mmの間隔で形成され、各薄膜の端部2mmの部分で、各薄膜が重なり合うことによって、電氣的に接続された状態となっている。この熱電変換素子は、図8に示すものと同様の形状である。

[0140] 実施例53〜59

下記表4に示す組成のp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を形成すること以外は、実施例52と同様にして、実施例53〜59の各熱電変換素子を作製した。尚、原料粉末の製造時の加熱温度については、具体的な組成に応じて700℃〜1100℃の範囲で変更した。

- [0141] 下記表4において、eは8〜10の範囲の値、kは8〜10の範囲の値、rは2.7〜3.3の範囲の値、wは3.6〜4.4の範囲の値、r'は2.8〜3.2の範囲の値である。

- [0142] 実施例52〜59で作製した各熱電変換素子について、実施例1と同様にして、発生電圧(開放電圧)、電気抵抗及び発電出力を測定した結果を下記表4に示す。

[0143] [表4]

実施例	P型熱電材料組成／n型熱電材料組成	開放電圧(mV)	電気	出力(μ W)
		高温側 100℃ 温度差 30〜40℃	抵抗(Ω) 100℃	高温側 100℃ 温度差 30〜40℃
52	$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_k / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	1.5	670	0.84
53	$\text{Bi}_{2.2}\text{Sr}_{2.2}\text{Co}_2\text{O}_k / \text{LaNiO}_r$	1.3	680	0.62
54	$\text{Bi}_{1.8}\text{Pb}_{0.4}\text{Sr}_{1.8}\text{Ca}_{0.4}\text{Co}_2\text{O}_k / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_{r'}$	1.2	685	0.52
55	$\text{Bi}_2\text{Ba}_2\text{Co}_2\text{O}_k / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	1.4	675	0.72
56	$\text{Ca}_{3.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	1.1	710	0.42
57	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{LaNiO}_r$	0.9	720	0.28
58	$\text{Ca}_{3.3}\text{Na}_{0.3}\text{Co}_4\text{O}_e / \text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_{r'}$	1.0	730	0.34
59	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	1.1	740	0.41

[0144] 実施例60

以下の方法で、エアロゾル堆積法に用いる原料粉末を作製した後、ポリイミド樹脂(商品名:カプトン)製のシートを基板として、エアロゾル堆積法によって熱電変換素子を作製した。

[0145] (1)原料粉末の作製

(i)p型熱電変換材料粉末

炭酸カルシウム(CaCO_3)、酸化ビスマス(Bi_2O_3)及び酸化コバルト(Co_3O_4)を原料として用い、これらをCa:Bi:Co(原子比)=2.7:0.3:4となるように混合し、電気炉を用いて、大気中で800℃で10時間仮焼した後、加圧成型し、さらに850℃で20時間焼成した。その後、ボールミルを用いて焼結体を粉砕して、平均粒径4 μm の組成式: $\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e$ で表されるp型熱電変換材料の原料粉末を得た。

(ii)n型熱電変換材料粉末

La源として硝酸ランタン($\text{La}_2(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$)、Bi源として硝酸ビスマス($\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$)、Ni源として硝酸ニッケル($\text{Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$)を用い、La:Bi:Ni(元素比)=0.9:0.1:1.0となる割合でこれらの原料を蒸留水に完全に溶解させ、アルミナるつぼ中で十分に攪拌混合した後、水分を蒸発させて乾固した。次いで、電気炉を用いて、析出物を空気中で600℃で10時間焼成して、硝酸塩を分解した。その後、焼成物を粉砕し、加圧成形後、300ml/分の酸素気流中で1000℃で20時間加熱した。その後、ボールミルを用いて、焼結体を粉砕し平均粒径4 μm の組成式: $\text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$ で表されるn型熱電変換材料の原料粉末を得た。

[0146] (2)熱電変換素子の作製

8mm×8mm×0.05mmのポリイミド(商品名:カプトン)シートを基板として用い、圧力1kPaの減圧チャンバー内で、p型熱電変換材料膜とn型熱電変換材料膜を順次堆積させて、熱電変換素子を作製した。この際、幅3mm、長さ8mm、長さ方向の一端部から2mmについては幅が5mmとなるL字形の開口部を有するマスクを用いて、L字型の短辺部分でp型熱電変換材料とn型熱電変換材料が重なり合うようにして、両材料を堆積させた。尚、基板を加熱することなく、室温において各薄膜を形成した。

[0147] 具体的な成膜条件としては、搬送ガスとしてHeを用い、ガス流量7L/分、ノズル基板間距離15mmとして、p型熱電変換材料の原料粉末とn型熱電変換材料の原料粉末を順次吹き付けて、厚さ約50 μm のp型熱電変換材料薄膜とn型熱電変換材料薄膜を形成した熱電変換素子を得た。被膜形成後も加熱は行わなかった。

[0148] 得られた熱電変換素子は、図1(d)に示す素子と同様の形状を有するものであり、長さ8mm、幅3mmのp型熱電変換材料の薄膜とn型熱電変換材料の薄膜が2mmの間隔で形成され、各薄膜の端部2mmの部分で、各薄膜が重なり合うことによって、電氣的に接続された状態となっている。この素子の高温部を150℃になるように電気ヒーターで加熱し、低温部を120℃とした時、4.7nWの発電が可能であった。

[0149] 実施例61～67

下記表5に示す組成のp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を形成すること以外は、実施例60と同様にして、実施例61～67の各熱電変換素子を作製した。尚、原料粉末の製造時の加熱温度については、具体的な組成に応じて700℃～1100℃の範囲で変更した。

[0150] 下記表5において、eは8～10の範囲の値、kは8～10の範囲の値、rは2.7～3.3の範囲の値、wは3.6～4.4の範囲の値である。

[0151] 実施例60～67で作製した各熱電変換素子について、実施例1と同様にして、発生電圧(開放電圧)、電気抵抗及び発電出力を測定した結果を下記表5に示す。

[0152] [表5]

実施例	p 熱電材料組成／n 型熱電材料組成	開放電圧(mV)	電気抵抗(Ω) 100℃	出力 (nW)
		高温側 100℃ 温度差 30～40℃		高温側 100℃ 温度差 30～40℃
60	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	1.5	330	1.7
61	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{LaNiO}_r$	1.2	360	1.0
62	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	1.4	365	1.3
63	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{La}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_w$	1.3	355	1.2
64	$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_k / \text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_r$	0.9	490	0.4
65	$\text{Bi}_{2.2}\text{Sr}_{2.2}\text{Co}_2\text{O}_k / \text{LaNiO}_r$	1.1	510	0.6
66	$\text{Bi}_{1.8}\text{Pb}_{0.2}\text{Ca}_2\text{Co}_2\text{O}_k / \text{La}_{1.8}\text{Bi}_{0.2}\text{NiO}_w$	1.1	480	0.6
67	$\text{Bi}_{2.1}\text{Ca}_{0.4}\text{Sr}_{1.7}\text{Co}_2\text{O}_k / \text{La}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_w$	1.0	490	0.5

[0153] 実施例68

以下の方法で、スパッタリング法に用いるターゲットを作製した後、スパッタリング法によって、熱電変換素子を作製した。

[0154] (1)ターゲットの作製

(i) p型熱電変換材料用ターゲット

酸化ビスマス(Bi_2O_3)、炭酸ストロンチウム(SrCO_3)及び酸化コバルト(Co_3O_4)を原料として用い、これらをBi:Sr:Co(原子比)=2:2:2となるように混合し、電気炉を用い大気中で800℃で10時間仮焼した後、加圧成型し、さらに850℃で20時間焼成して得られた粉末を、銅プレート上に直径10cm、厚さ2mmに敷き詰めてp型熱電変換材料用ターゲットを作製した。

(ii) n型熱電変換材料用ターゲット

酸化亜鉛(ZnO)に酸化ガリウム(Ga_2O_3)を5wt%添加し、直径10cm、厚さ3mmの円盤状に焼結した物をターゲットとした。

[0155] (2) 熱電変換素子の作製

上記した各ターゲットを用い、8mm×8mm×0.5mmのポリイミドフィルムを基板として、RFスパッタリング法によりp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を順次堆積させた。この際、幅3mm、長さ8mmで、長さ方向の一端部から2mmについては幅が5mmとなるL字形の開口部を有するマスクを用いて、L字型の短辺部分でp型熱電変換材料とn型熱電変換材料が重なり合うようにして、両材料を堆積させた。尚、基板加熱は行わず、プラズマによる温度上昇は260℃以下となるように制御した。具体的な成膜条件は下記の通りである。

- ・スパッタリングガス: Ar、 O_2
- ・RF電力: 50〜200W
- ・基板: ポリイミドフィルム

上記した方法でp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を形成した。

[0156] 得られた熱電変換素子は、図1(d)に示す素子と同様の形状を有するものであり、長さ8mm、幅3mm、膜厚1〜2 μm のp型熱電変換材料の薄膜とn型熱電変換材料の薄膜が2mmの間隔で形成され、各薄膜の端部2mmの部分で、各薄膜が重なり合うことによって、電氣的に接続された状態となっている。この熱電変換素子は、図8に示すものと同様の構造である。

[0157] 実施例69〜75

下記表6に示す組成のp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を形成すること以外は、実施例68と同様にして、実施例69〜75の各熱電変換素子を作製

した。尚、原料粉末の製造時の加熱温度については、具体的な組成に応じて700℃～1100℃の範囲で変更した。

[0158] 下記表6において、eは8～10の範囲の値、kは8～10の範囲の値、zは0.9～1.1の範囲の値、zzは1.9～3の範囲の値である。

[0159] 実施例68～75で作製した各熱電変換素子について、実施例1と同様にして、発生電圧（開放電圧）、電気抵抗及び発電出力を測定した結果を下記表6に示す。

[0160] [表6]

実施例	P型熱電材料組成／n型熱電材料組成	開放電圧(mV)	電気	出力(μ W)
		高温側 100℃ 温度差 30～40℃	抵抗(Ω) 100℃	高温側 100℃ 温度差 30～40℃
68	$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_k / \text{Ga}_{0.1}\text{Zn}_{0.9}\text{O}_z$	2.9	570	3.69
69	$\text{Bi}_{2.2}\text{Sr}_{2.2}\text{Co}_2\text{O}_k / \text{Al}_{0.1}\text{Zn}_{0.9}\text{O}_z$	2.6	590	2.86
70	$\text{Bi}_{1.8}\text{Pb}_{0.4}\text{Sr}_{1.8}\text{Ca}_{0.4}\text{Co}_2\text{O}_k / \text{In}_{0.1}\text{Zn}_{0.9}\text{O}_z$	2.7	610	2.99
71	$\text{Bi}_2\text{Ba}_2\text{Co}_2\text{O}_k / \text{Sn}_{0.1}\text{In}_{1.9}\text{O}_{zz}$	2.5	585	2.67
72	$\text{Ca}_{3.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{Ga}_{0.1}\text{Zn}_{0.9}\text{O}_z$	2.6	610	2.77
73	$\text{Ca}_3\text{Co}_4\text{O}_e / \text{Al}_{0.1}\text{Zn}_{0.9}\text{O}_z$	2.8	600	3.27
74	$\text{Ca}_{3.3}\text{Na}_{0.3}\text{Co}_4\text{O}_e / \text{In}_{0.1}\text{Zn}_{0.9}\text{O}_z$	2.4	605	2.38
75	$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_e / \text{Sn}_{0.1}\text{In}_{1.9}\text{O}_{zz}$	2.2	595	2.03

[0161] 以下、各種組成の酸化物からなる熱電変換材料について、参考例として物性値を示す。

[0162] 参考例1

一般式： $\text{Ca}_a\text{A}_b^1\text{Co}_c\text{A}_d^2\text{O}_e$ 又は一般式： $\text{Bi}_f\text{Pb}_g\text{M}_h^1\text{Co}_i\text{M}_j^2\text{O}_k$ で表されるp型熱電変換材料としての特性を有する複合酸化物を下記の方法で作製した。

[0163] 原料物質としては、目的とする複合酸化物の構成元素を含む炭酸塩又は酸化物を用い、表7～表74に記載した組成式と同じ元素比となるように原料物質を混合し、大気圧中において、1073Kで10時間仮焼した。次いで、得られた焼成物を粉砕し、成形して、300mL／分の酸素ガス気流中で20時間焼成した。その後、得られた焼成物を粉砕、加圧成形し、空気中で10MPaの一軸加圧下に、20時間のホットプレス焼結を行い、p型熱電変換材料用の複合酸化物を作製した。各酸化物を製造する際の焼成温度については、組成に応じて1073～1273Kの範囲で変更し、更に、ホットプレス焼結の温度についても、1123～1173Kの範囲で変更した。

[0164] 得られた各酸化物について、700℃におけるゼーベック係数、700℃における電気抵抗率及び700℃における熱伝導度の測定結果を下記表7ー表74に示す。

[0165] [表7]

p 型

組成 $\text{Ca}_3\text{A}^1\text{bCo}_c\text{A}^2\text{dO}_e$	ゼーベック係数 $\mu\text{V/K}$ (700℃)	電気抵抗率 $\text{m}\Omega\text{cm}$ (700℃)	熱伝導度 W/mK (700℃)
$\text{Ca}_3\text{Co}_4\text{O}_9$	205	5.5	2.5
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_4\text{O}_9$	198	4.2	2.2
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_4\text{O}_9$	195	6.0	2.2
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_4\text{O}_9$	200	7.2	2.4
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_4\text{O}_9$	205	6.8	2.6
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_4\text{O}_9$	198	5.7	2.5
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_4\text{O}_9$	199	6.2	3.0
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_4\text{O}_9$	210	6.8	2.6
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_4\text{O}_9$	202	8.0	2.9
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_4\text{O}_9$	204	7.9	1.9
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_4\text{O}_9$	197	6.9	2.2
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_4\text{O}_9$	205	5.9	2.6
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_4\text{O}_9$	201	7.8	2.5
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_4\text{O}_9$	196	6.3	3.0
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_4\text{O}_9$	202	6.5	1.9
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_4\text{O}_9$	203	6.4	2.0
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_9$	208	8.2	2.2
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_4\text{O}_9$	198	7.5	2.3
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_4\text{O}_9$	199	6.9	1.9
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_4\text{O}_9$	201	8.1	3.1
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_4\text{O}_9$	207	7.6	2.6
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_4\text{O}_9$	190	5.9	2.7
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_4\text{O}_9$	198	5.8	2.4
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_4\text{O}_9$	199	7.2	1.9
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_4\text{O}_9$	201	8.2	3.0
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_4\text{O}_9$	200	7.1	2.1
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_4\text{O}_9$	206	6.5	2.2
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_4\text{O}_9$	205	6.9	2.6
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_4\text{O}_9$	198	7.0	2.7
$\text{Ca}_3\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	200	6.8	1.9
$\text{Ca}_3\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	203	7.2	2.9
$\text{Ca}_3\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	201	5.9	2.4

[0166] [表8]

$\text{Ca}_3\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	208	8.1	2.6
$\text{Ca}_3\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	198	7.2	2.7
$\text{Ca}_3\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	199	6.4	1.9
$\text{Ca}_3\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	207	5.9	3.0
$\text{Ca}_3\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	198	6.0	2.7
$\text{Ca}_3\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	196	5.9	2.7
$\text{Ca}_3\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	200	7.2	2.8
$\text{Ca}_3\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	198	8.1	2.2
$\text{Ca}_3\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	205	6.9	2.5
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	205	6.2	2.6
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	198	6.8	2.0
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	195	8.0	1.9
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	200	7.9	2.3
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	205	6.9	2.5
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	198	5.9	2.7
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	199	7.8	2.5
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	210	6.3	2.6
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	202	6.5	2.4
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	207	6.4	2.3
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	198	8.2	2.2
$\text{Ca}_{2.7}\text{Na}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	196	7.5	2.1
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	198	8.1	1.8
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	205	7.6	2.7
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	196	5.9	2.6
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	205	5.8	2.5
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	198	7.2	2.1
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	198	8.2	2.3
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	195	7.1	2.7
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	200	6.5	2.8
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	203	6.9	2.5
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	201	7.0	2.4
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	208	7.2	2.8
$\text{Ca}_{2.7}\text{K}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	198	6.8	3.0
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	207	5.9	1.9

[0167] [表9]

$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	198	8.1	2.6
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	199	7.2	2.5
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	210	6.4	3.0
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	202	5.9	1.9
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	204	6.0	2.0
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	197	5.9	2.2
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	205	7.2	2.3
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	201	8.1	1.9
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	196	6.9	3.1
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	202	5.7	2.6
$\text{Ca}_{2.7}\text{Li}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	203	6.2	2.7
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	198	8.0	1.9
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	199	7.9	3.0
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	201	6.9	2.1
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	207	5.9	2.2
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	190	7.8	2.6
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	198	6.3	2.7
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	199	6.5	2.5
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	201	6.4	1.9
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	200	5.8	2.9
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	206	7.2	2.4
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	205	8.2	2.6
$\text{Ca}_{2.7}\text{Ti}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	198	7.1	2.7
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	196	6.9	3.0
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	202	7.0	2.7
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	203	7.2	2.7
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	208	6.8	2.8
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	198	7.2	2.2
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	199	5.9	2.5
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	201	8.1	2.7
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	207	7.2	2.6
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	190	6.4	2.0
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	198	5.9	1.9
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	199	6.0	2.3
$\text{Ca}_{2.7}\text{V}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	201	5.9	2.5

[0168] [表10]

$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	206	8.1	2.5
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	207	6.9	2.6
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	198	5.7	2.4
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	199	6.2	2.3
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	210	6.8	2.2
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	202	8.0	2.2
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	204	7.9	2.4
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	197	6.9	2.6
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	205	5.9	2.5
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	201	7.8	3.0
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	196	6.3	2.6
$\text{Ca}_{2.7}\text{Cr}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	202	6.5	2.9
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	208	8.2	2.2
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	198	7.5	2.6
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	199	6.9	2.5
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	201	8.1	3.0
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	207	7.6	1.9
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	190	5.9	2.0
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	198	5.8	2.2
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	199	7.2	2.3
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	201	8.2	1.9
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	200	7.1	3.1
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	206	6.5	2.6
$\text{Ca}_{2.7}\text{Mn}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	205	6.9	2.7
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	201	7.2	1.9
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	196	6.8	3.0
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	202	6.4	2.1
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	203	8.2	2.2
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	205	7.5	2.6
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	198	6.9	2.7
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	195	8.1	2.5
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	200	7.6	1.9
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	205	5.9	2.9
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	198	5.8	2.4

[0169] [表11]

$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	199	7.2	2.6
$\text{Ca}_{2.7}\text{Fe}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	210	8.2	2.7
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	204	6.5	3.0
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	197	6.9	2.7
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	205	7.0	2.7
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	201	7.2	2.8
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	196	6.8	2.2
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	202	4.2	2.5
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	203	6.0	2.7
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	208	7.2	2.6
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	198	6.8	2.0
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	199	5.7	1.9
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	199	6.2	2.3
$\text{Ca}_{2.7}\text{Ni}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	210	6.8	2.5
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	204	7.9	2.5
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	197	6.9	2.6
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	205	5.9	2.4
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	201	7.8	2.3
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	196	6.3	2.2
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	202	6.5	2.7
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	203	6.4	2.6
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	208	8.2	2.0
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	198	7.5	1.9
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	199	6.9	2.3
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	201	8.1	2.5
$\text{Ca}_{2.7}\text{Cu}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	207	7.6	2.7
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	198	5.8	1.9
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	199	7.2	2.3
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	201	8.2	2.5
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	200	7.1	2.7
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	206	6.5	2.5
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	205	6.9	2.6
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	198	7.0	2.4
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	201	8.2	2.3

[0170] [表12]

$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	201	7.5	2.2
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	196	6.9	2.2
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	202	8.1	2.4
$\text{Ca}_{2.7}\text{Zn}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	203	7.6	2.6
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	198	5.8	3.0
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	199	7.2	2.6
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	201	8.2	2.9
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	207	7.1	1.9
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	190	6.5	2.2
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	198	6.9	2.6
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	199	7.2	2.5
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	201	8.1	3.0
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	200	6.9	1.9
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	206	5.7	2.0
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	207	6.2	2.2
$\text{Ca}_{2.7}\text{Pb}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	198	6.8	2.3
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	210	7.9	3.1
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	202	6.9	2.6
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	204	5.9	2.7
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	197	7.8	2.4
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	205	6.3	1.9
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	201	6.5	3.0
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	196	6.4	2.1
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	202	8.2	2.2
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	203	7.5	2.6
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	208	6.9	2.7
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	198	8.1	2.5
$\text{Ca}_{2.7}\text{Sr}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	199	7.6	1.9
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	201	5.9	2.9
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	207	5.8	2.4
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	190	7.2	2.6
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	198	8.2	2.7
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	199	7.1	1.9
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	201	6.5	3.0
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	200	6.9	2.7

[0171] [表13]

$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	206	7.0	2.7
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	205	7.2	2.8
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	198	6.8	2.2
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	201	6.4	2.5
$\text{Ca}_{2.7}\text{Ba}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	196	8.2	2.7
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	203	6.9	2.0
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	205	8.1	1.9
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	198	7.6	2.3
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	195	5.9	2.5
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	200	5.8	2.7
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	205	7.2	2.5
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	198	8.2	2.6
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	199	7.1	2.5
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	210	6.5	2.7
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	202	6.9	2.5
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	204	7.0	2.6
$\text{Ca}_{2.7}\text{Al}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	197	7.2	2.4
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	201	4.2	2.2
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	196	6.0	2.2
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	202	7.2	2.4
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	203	6.8	2.6
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	208	5.7	2.5
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	198	6.2	3.0
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	199	6.8	2.6
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	201	8.0	2.9
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	207	7.9	1.9
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	190	6.9	2.2
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	198	5.9	2.6
$\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	199	7.8	2.5
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	200	6.9	1.9
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	206	7.2	2.0
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	205	8.1	2.2
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	198	6.9	2.3
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	201	5.7	1.9

[0172] [表14]

$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	196	6.2	3.1
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	202	6.8	2.6
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	203	8.0	2.7
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	205	7.9	2.4
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	198	6.9	1.9
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	195	5.9	3.0
$\text{Ca}_{2.7}\text{Y}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	200	7.8	2.1
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	198	6.5	2.6
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	199	6.4	2.7
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	210	8.2	2.5
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	202	7.5	1.9
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	204	6.9	2.6
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	197	8.1	2.4
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	205	7.6	2.3
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	201	5.9	2.2
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	196	5.8	2.7
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	202	7.2	2.6
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	203	8.2	2.0
$\text{Ca}_{2.7}\text{La}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	208	7.1	1.9
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	199	6.9	2.5
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	199	7.0	2.7
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	210	7.2	2.5
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	202	6.8	1.9
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	204	6.4	2.3
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	197	8.2	2.5
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	205	7.5	2.7
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	201	6.9	2.5
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	196	8.1	2.6
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	202	7.6	2.4
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	203	5.9	2.3
$\text{Ca}_{2.7}\text{Ce}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	208	5.8	2.2
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	199	8.2	2.4
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	201	7.1	2.3
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	207	6.5	2.2

[0173] [表15]

$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	190	6.9	2.2
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	198	7.0	2.4
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	199	6.9	2.6
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	201	8.1	2.5
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	207	7.6	3.0
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	190	5.9	2.6
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	198	5.8	2.9
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	199	7.2	1.9
$\text{Ca}_{2.7}\text{Pr}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	201	8.2	2.2
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	206	6.5	2.5
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	205	6.9	3.0
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	198	7.0	1.9
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	195	7.2	2.0
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	200	6.8	2.2
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	203	6.4	2.3
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	201	8.2	1.9
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	208	7.5	3.1
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	198	6.9	2.6
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	199	8.1	2.7
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	207	7.6	2.4
$\text{Ca}_{2.7}\text{Nd}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	198	5.9	1.9
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	200	7.2	2.1
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	198	8.2	2.2
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	205	7.1	2.6
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	196	6.5	2.7
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	205	6.9	2.5
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	198	6.8	1.9
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	195	7.2	2.6
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	200	5.9	2.4
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	205	8.1	2.3
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	198	7.2	2.2
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	199	6.4	2.7
$\text{Ca}_{2.7}\text{Sm}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	210	5.9	2.6
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	207	5.9	1.9

[0174] [表16]

$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	198	7.2	2.3
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	196	8.1	2.5
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	200	6.9	2.6
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	198	5.7	2.9
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	205	6.2	1.9
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	196	6.8	2.2
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	205	8.0	2.6
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	198	7.9	2.5
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	198	6.9	3.0
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	195	5.9	1.9
$\text{Ca}_{2.7}\text{Eu}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	200	7.8	2.0
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	201	6.5	2.3
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	208	6.4	1.9
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	198	8.2	3.1
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	199	7.5	2.6
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	207	6.9	2.7
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	198	8.1	2.4
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	199	7.6	1.9
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	210	5.9	3.0
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	202	5.8	2.1
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	204	7.2	2.2
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	197	8.2	2.4
$\text{Ca}_{2.7}\text{Gd}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	205	7.1	2.6
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	196	6.9	3.0
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	202	7.0	2.6
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	203	7.2	2.9
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	208	6.8	1.9
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	198	7.2	2.2
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	199	5.9	2.6
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	201	6.2	2.5
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	207	6.8	3.0
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	190	8.0	1.9
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	198	7.9	2.0
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	199	6.9	2.2
$\text{Ca}_{2.7}\text{Dy}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	201	5.9	2.3

[0175] [表17]

$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	206	7.8	1.9
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	205	6.3	3.1
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	198	6.5	2.6
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	201	6.4	2.7
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	196	8.2	2.4
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	202	7.5	1.9
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	203	6.9	3.0
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	208	8.1	2.1
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	198	7.6	2.2
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	199	5.9	2.6
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	201	5.8	2.7
$\text{Ca}_{2.7}\text{Ho}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	207	7.0	2.5
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	205	6.8	2.6
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	198	6.4	2.4
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	195	8.2	2.3
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	200	7.5	2.2
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	205	6.9	2.7
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	198	8.1	2.6
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	199	7.6	2.0
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	210	5.9	1.9
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	202	5.8	2.3
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	198	7.2	2.6
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	201	8.2	2.9
$\text{Ca}_{2.7}\text{Er}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	196	7.1	1.9
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.8}\text{Ti}_{0.2}\text{O}_9$	203	6.9	2.6
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.8}\text{V}_{0.2}\text{O}_9$	208	7.0	2.5
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.8}\text{Cr}_{0.2}\text{O}_9$	198	7.2	3.0
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.8}\text{Mn}_{0.2}\text{O}_9$	199	6.8	1.9
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.8}\text{Fe}_{0.2}\text{O}_9$	201	4.2	2.0
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.8}\text{Ni}_{0.2}\text{O}_9$	207	6.0	2.6
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.8}\text{Cu}_{0.2}\text{O}_9$	203	7.2	2.7
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.9}\text{Ag}_{0.1}\text{O}_9$	205	6.8	2.4
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.9}\text{Mo}_{0.1}\text{O}_9$	198	5.7	1.9
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.9}\text{W}_{0.1}\text{O}_9$	201	6.2	3.0
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.9}\text{Nb}_{0.1}\text{O}_9$	196	6.8	2.1
$\text{Ca}_{2.7}\text{Yb}_{0.3}\text{Co}_{3.9}\text{Ta}_{0.1}\text{O}_9$	202	8.0	2.2

[0176] [表18]

組成 $\text{Bi}_i\text{Pb}_j\text{M}^1_n\text{Co}_i\text{M}^2_j\text{O}_k$	ゼーベック係数 $\mu\text{V/K}$ (700℃)	電気抵抗率 $\text{m}\Omega\text{ cm}$ (700℃)	熱伝導度 W/mK (700℃)
$\text{Bi}_2\text{Sr}_2\text{Co}_2\text{O}_9$	210	6.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_2\text{O}_9$	205	5.9	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_2\text{O}_9$	195	6.7	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_2\text{O}_9$	208	8.0	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_2\text{O}_9$	220	8.1	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_2\text{O}_9$	198	8.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_2\text{O}_9$	201	7.8	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_2\text{O}_9$	207	7.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_2\text{O}_9$	190	9.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_2\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_2\text{O}_9$	199	7.5	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_2\text{O}_9$	201	8.6	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_2\text{O}_9$	200	8.2	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_2\text{O}_9$	206	7.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_2\text{O}_9$	205	6.9	0.7
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_2\text{O}_9$	198	8.1	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_2\text{O}_9$	201	9.0	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_2\text{O}_9$	196	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_2\text{O}_9$	202	7.9	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_2\text{O}_9$	203	8.6	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_2\text{O}_9$	205	9.1	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_2\text{O}_9$	198	6.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_2\text{O}_9$	195	7.4	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_2\text{O}_9$	200	7.8	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_2\text{O}_9$	205	7.7	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_2\text{O}_9$	198	8.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_2\text{O}_9$	199	8.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_2\text{O}_9$	210	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_2\text{O}_9$	204	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_2\text{O}_9$	197	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_2\text{O}_9$	190	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_2\text{O}_9$	198	9.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_2\text{O}_9$	199	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_2\text{O}_9$	201	8.3	1.1

[0177] [表19]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_2\text{O}_9$	207	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_2\text{O}_9$	190	8.7	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_2\text{O}_9$	198	8.3	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_2\text{O}_9$	199	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_2\text{O}_9$	201	7.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_2\text{O}_9$	210	8.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_2\text{O}_9$	206	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_2\text{O}_9$	205	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_2\text{O}_9$	198	7.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_2\text{O}_9$	195	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_2\text{O}_9$	200	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_2\text{O}_9$	203	7.5	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_2\text{O}_9$	201	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_2\text{O}_9$	208	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_2\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_2\text{O}_9$	199	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_2\text{O}_9$	207	8.1	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_2\text{O}_9$	198	9.0	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_2\text{O}_9$	201	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_2\text{O}_9$	200	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_2\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_2\text{O}_9$	205	9.1	1.0
$\text{Bi}_2\text{Ca}_2\text{Co}_2\text{O}_9$	205	7.4	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_2\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_2\text{O}_9$	195	7.7	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_2\text{O}_9$	200	8.0	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_2\text{O}_9$	205	8.2	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_2\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_2\text{O}_9$	199	9.1	0.7
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_2\text{O}_9$	210	8.4	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_2\text{O}_9$	200	8.6	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_2\text{O}_9$	207	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_2\text{O}_9$	198	7.9	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_2\text{O}_9$	196	8.6	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_2\text{O}_9$	200	9.1	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_2\text{O}_9$	198	6.9	1.1

[0178] [表20]

$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_2\text{O}_9$	205	7.4	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_2\text{O}_9$	196	7.8	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_2\text{O}_9$	205	7.7	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_2\text{O}_9$	198	8.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_2\text{O}_9$	198	8.2	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_2\text{O}_9$	195	7.9	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_2\text{O}_9$	200	9.1	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_2\text{O}_9$	210	8.4	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_2\text{O}_9$	201	8.6	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_2\text{O}_9$	208	7.8	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_2\text{O}_9$	198	9.0	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_2\text{O}_9$	199	8.2	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_2\text{O}_9$	207	8.3	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_2\text{O}_9$	198	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_2\text{O}_9$	210	8.3	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_2\text{O}_9$	202	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_2\text{O}_9$	204	7.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_2\text{O}_9$	197	8.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_2\text{O}_9$	205	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_2\text{O}_9$	208	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_2\text{O}_9$	196	7.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_2\text{O}_9$	202	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_2\text{O}_9$	203	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_2\text{O}_9$	208	7.5	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_2\text{O}_9$	198	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_2\text{O}_9$	199	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_2\text{O}_9$	201	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_2\text{O}_9$	207	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_2\text{O}_9$	190	8.1	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_2\text{O}_9$	198	9.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_2\text{O}_9$	199	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_2\text{O}_9$	201	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_2\text{O}_9$	190	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_2\text{O}_9$	198	9.1	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_2\text{O}_9$	199	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_2\text{O}_9$	201	8.2	1.1

[0179] [表21]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_2\text{O}_9$	200	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_2\text{O}_9$	206	9.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_2\text{O}_9$	205	8.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_2\text{O}_9$	198	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_2\text{O}_9$	201	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_2\text{O}_9$	196	9.0	0.7
$\text{Bi}_2\text{Ba}_2\text{Co}_2\text{O}_9$	203	8.3	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_2\text{O}_9$	205	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_2\text{O}_9$	198	8.7	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_2\text{O}_9$	195	8.3	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_2\text{O}_9$	200	9.0	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_2\text{O}_9$	205	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_2\text{O}_9$	198	8.1	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_2\text{O}_9$	199	8.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_2\text{O}_9$	210	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_2\text{O}_9$	202	7.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_2\text{O}_9$	204	9.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_2\text{O}_9$	197	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_2\text{O}_9$	190	7.5	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_2\text{O}_9$	198	8.6	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_2\text{O}_9$	199	8.2	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_2\text{O}_9$	201	7.9	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_2\text{O}_9$	207	6.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_2\text{O}_9$	190	8.1	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_2\text{O}_9$	198	9.0	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_2\text{O}_9$	199	8.2	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_2\text{O}_9$	201	7.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_2\text{O}_9$	210	8.6	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_2\text{O}_9$	206	9.1	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_2\text{O}_9$	205	6.9	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_2\text{O}_9$	198	7.4	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_2\text{O}_9$	195	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_2\text{O}_9$	200	7.7	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_2\text{O}_9$	203	8.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_2\text{O}_9$	208	7.9	0.9

[0180] [表22]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_2\text{O}_9$	198	8.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_2\text{O}_9$	199	8.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_2\text{O}_9$	200	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_2\text{O}_9$	206	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_2\text{O}_9$	205	7.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_2\text{O}_9$	198	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_2\text{O}_9$	201	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_2\text{O}_9$	196	7.5	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_2\text{O}_9$	202	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_2\text{O}_9$	203	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_2\text{O}_9$	205	7.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_2\text{O}_9$	198	6.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_2\text{O}_9$	195	8.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_2\text{O}_9$	200	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_2\text{O}_9$	205	8.2	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_2\text{O}_9$	198	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_2\text{O}_9$	199	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_2\text{O}_9$	210	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_2\text{O}_9$	202	6.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_2\text{O}_9$	207	7.4	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_2\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_2\text{O}_9$	199	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_2\text{O}_9$	210	8.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_2\text{O}_9$	202	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_2\text{O}_9$	204	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_2\text{O}_9$	197	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_2\text{O}_9$	205	8.4	1.2
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	196	7.8	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	9.0	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	8.2	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	208	8.3	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.6	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.7	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.3	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	207	9.0	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	7.9	1.3

[0181] [表23]

$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.1	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	7.8	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	7.2	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	9.0	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	7.8	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	7.5	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	8.6	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	206	8.2	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	6.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.1	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	196	9.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	8.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	7.9	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.6	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	9.1	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	195	6.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	7.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	210	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	204	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	197	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	7.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	207	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	7.4	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	7.7	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	210	8.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	206	8.2	1.0

[0182] [表24]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	195	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	208	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.3	1.2
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	7.9	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	206	8.1	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	7.8	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	7.2	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	196	9.0	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	7.8	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	7.5	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.6	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.2	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	195	7.9	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	6.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.1	0.7
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	7.5	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.6	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	210	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	7.9	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	204	6.9	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	197	8.1	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	9.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.2	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	7.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	207	9.1	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	6.9	1.2

[0183] [表25]

$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	7.4	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	7.8	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	206	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	195	8.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	7.5	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	208	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	6.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	7.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	196	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	208	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	7.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	207	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	9.0	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.2	1.3
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.7	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.3	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	9.0	0.9

[0184] [表26]

$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	206	8.1	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	7.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	196	9.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	7.5	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.6	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.2	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	195	7.9	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	6.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.1	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	9.0	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.2	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	210	7.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	8.6	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	204	9.1	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	197	6.9	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	190	7.4	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	7.7	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.0	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	207	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	210	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	206	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	9.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	195	6.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	7.7	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	208	8.0	1.2

[0185] [表27]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	196	8.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	203	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	195	8.3	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	205	8.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	198	8.3	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	199	9.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	210	7.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	202	8.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	204	8.0	1.0
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	7.2	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	9.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	7.8	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	7.5	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	207	8.6	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	6.9	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.1	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	210	6.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	206	7.4	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	7.8	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.7	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	195	8.0	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	203	7.9	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	9.1	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	208	8.4	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	8.2	0.8

[0186] [表28]

$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.9	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	8.6	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	9.1	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	6.9	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	206	7.4	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	7.8	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.7	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	202	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	203	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	8.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	195	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	9.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.3	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	210	8.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	202	8.3	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	204	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	197	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	8.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.0	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	7.8	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	7.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	207	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	7.8	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.5	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	210	7.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	206	6.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	8.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.5	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	195	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	8.2	1.2

[0187] [表29]

$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	203	7.9	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	6.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	208	8.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	9.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	7.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	206	8.6	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	9.1	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	6.9	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	206	7.4	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	7.8	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.7	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	195	8.0	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	8.2	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	203	8.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	7.4	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	208	7.8	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	7.7	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	8.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.2	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	7.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	9.1	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	8.4	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	206	8.6	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	8.2	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.6	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	196	9.1	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	203	7.4	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	195	8.3	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	8.6	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	8.7	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.3	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	9.0	1.3

[0188] [表30]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	210	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	202	8.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	204	8.0	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	197	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	7.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	7.8	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	7.5	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	207	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	210	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	206	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	195	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	6.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	203	7.4	0.8
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	208	7.7	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.0	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	8.2	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	7.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	9.1	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	210	8.4	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	202	8.6	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	204	8.2	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	197	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	8.6	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	9.1	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	6.9	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	7.4	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	207	7.8	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	7.7	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.0	0.8

[0189] [表31]

$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	8.2	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	7.9	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	210	9.1	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	206	8.4	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	8.6	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	195	9.0	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	8.2	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	203	8.3	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	208	8.7	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	8.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	206	7.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	7.5	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	196	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	202	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	203	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	6.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.1	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	195	6.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	200	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	205	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	7.7	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	8.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	210	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	202	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	204	9.1	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	197	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	198	8.2	1.1

[0190] [表32]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	199	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	207	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	190	6.9	1.2
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	7.8	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	7.7	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	210	8.0	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	7.9	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	9.1	0.7
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	195	8.4	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	8.6	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	203	7.8	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	9.0	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	208	8.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.3	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	8.6	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	8.7	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	8.3	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	9.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	8.1	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.0	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	195	7.8	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	7.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	203	9.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	7.8	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	208	7.5	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.6	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	7.9	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	6.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	202	7.5	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	204	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	197	8.2	1.2

[0191] [表33]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	8.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	207	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	9.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	203	6.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	208	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.7	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	8.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	210	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	202	8.3	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	204	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	197	8.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	8.3	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	9.0	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	8.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	207	8.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	7.8	0.8
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	9.0	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	7.8	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	210	7.5	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	8.6	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	8.2	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	195	6.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	8.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	203	9.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	208	7.9	1.2

[0192] [表34]

$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	9.1	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	6.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	7.4	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	7.8	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	7.7	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	8.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.9	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	9.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	196	8.4	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	202	8.6	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	203	8.2	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	7.9	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.6	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	195	9.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	6.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	7.7	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	210	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	202	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	204	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	197	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	6.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	8.6	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	207	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	7.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	6.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	210	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	7.7	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.0	0.8

[0193] [表35]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	195	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	203	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	8.1	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	208	8.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	7.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	9.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	7.8	1.3
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	8.2	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	207	6.9	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	8.1	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	6.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	7.4	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	7.8	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	210	7.7	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	8.0	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	8.2	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	195	9.1	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	8.4	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	203	8.6	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	8.2	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	208	7.9	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	9.1	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	6.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	7.4	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	7.8	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.7	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	206	8.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.2	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	195	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	9.1	1.2

[0194] [表36]

$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	203	8.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	208	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	8.3	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	210	8.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	202	8.3	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	204	9.0	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	197	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	8.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	7.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	207	9.0	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	190	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.5	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	201	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	196	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	202	6.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	203	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	7.5	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	195	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	200	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	205	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	6.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	199	8.1	1.1
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	202	7.4	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	204	7.8	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	197	7.7	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	8.0	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	7.9	1.4

[0195] [表37]

$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	9.1	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	207	8.4	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	8.6	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	7.9	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.6	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	210	9.1	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	6.9	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	7.4	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	7.8	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	195	7.7	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	8.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	203	8.2	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	7.9	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	208	9.1	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.4	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	8.6	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	7.8	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	9.0	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.3	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	207	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	8.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	210	7.8	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	7.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	9.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	195	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	6.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	203	8.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	208	7.4	0.9

[0196] [表38]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	7.7	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	8.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	9.1	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	8.4	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	195	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	203	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	208	6.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	7.4	1.1
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	7.7	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	8.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	210	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	202	7.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	204	9.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	197	8.4	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	8.6	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	7.8	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	9.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	207	8.3	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	8.6	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.7	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	208	8.3	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	9.0	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	7.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	8.1	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	8.0	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	210	7.8	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	202	7.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	204	9.0	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	197	7.8	0.9

[0197] [表39]

$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	7.5	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.6	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	8.2	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	7.9	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	207	6.9	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	7.5	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	203	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	208	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	6.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	8.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	6.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	7.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	210	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	202	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	204	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	197	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	207	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.6	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	210	7.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	195	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	7.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	203	9.1	1.3
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	208	8.6	1.3

[0198] [表40]

$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	9.0	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.2	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	9.1	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.4	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	7.8	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	9.0	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.3	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	196	8.6	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	202	8.7	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	203	8.3	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	9.0	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	195	8.1	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	8.0	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	7.8	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	7.2	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	9.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	210	8.2	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	202	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	204	6.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	197	8.1	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	6.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	7.4	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	207	8.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	9.1	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	210	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.6	0.9

[0199] [表41]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	195	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	203	7.4	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	208	7.7	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	200	7.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	205	8.4	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	206	7.8	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	9.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	207	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	190	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	8.4	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	201	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	210	7.9	1.1
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	9.1	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	6.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	195	7.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	7.8	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	203	7.7	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	8.0	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	208	8.2	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	9.1	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	8.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	8.6	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	7.8	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	9.0	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	8.2	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.3	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	195	8.6	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	8.7	1.3

[0200] [表42]

$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	203	8.3	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	9.0	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	208	7.9	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.1	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	8.0	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	7.8	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.2	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	210	9.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	202	8.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	204	7.9	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	197	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	208	6.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.4	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	8.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	210	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	202	7.9	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	204	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	197	8.4	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	190	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	207	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	190	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	210	8.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	195	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	203	7.8	1.3

[0201] [表43]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	208	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	8.3	1.0
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.7	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	8.3	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	9.0	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	7.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	8.1	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	8.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.8	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	7.2	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	196	9.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	202	7.8	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	203	7.5	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	8.6	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.2	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	195	7.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	6.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	9.0	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.8	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.5	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	210	8.6	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	202	8.2	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	204	7.9	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	197	6.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	190	8.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	6.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.4	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	7.8	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	207	7.7	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	190	8.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	9.1	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	210	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	8.6	1.0

[0202] [表44]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	195	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	9.1	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	203	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	7.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	208	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	9.1	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.4	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	8.6	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	207	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	190	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	210	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	9.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	8.4	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.6	1.2
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	9.0	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	203	8.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	8.3	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	208	8.6	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.7	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	8.3	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	9.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	7.9	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	8.1	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.8	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	7.2	1.3

[0203] [表45]

$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	9.0	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	210	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	202	7.5	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	204	8.6	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	197	8.2	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	190	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	6.9	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	9.0	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	7.8	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	207	7.5	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	190	8.6	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.2	0.7
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	6.9	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	210	8.1	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	206	6.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	195	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	8.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	203	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	196	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	202	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	203	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	195	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	200	9.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	205	6.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	210	7.7	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	202	8.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	204	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	197	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	190	9.1	1.0

[0204] [表46]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.4	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	207	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	190	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	198	8.3	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	199	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ni}_{0.1}\text{O}_9$	201	8.7	1.2
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	9.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	7.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.1	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	195	8.0	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	7.8	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	203	7.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	9.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	208	8.2	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.9	0.7
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	6.9	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	8.1	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	6.9	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	7.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.8	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	7.7	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.0	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	207	8.2	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	190	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	9.1	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	8.4	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	210	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	7.9	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	8.6	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	9.1	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	195	6.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	7.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	203	7.8	0.9

[0205] [表47]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	208	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	7.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	195	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	203	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	8.7	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	208	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	7.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	8.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	8.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	9.0	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	207	7.5	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	190	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	6.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	210	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	7.8	1.4
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.6	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	195	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	7.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	203	6.9	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	8.1	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	208	6.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.4	1.0

[0206] [表48]

$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	7.8	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	7.7	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	8.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.9	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	9.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	8.4	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	8.6	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	210	8.2	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	202	7.9	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	204	8.6	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	197	9.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	190	6.9	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.4	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	7.8	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	7.7	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	207	8.0	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	190	8.2	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	9.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	8.4	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	195	9.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	8.4	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	203	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	203	9.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	208	8.3	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	8.7	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	7.9	1.1

[0207] [表49]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	207	7.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	190	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	210	8.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	6.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	195	7.7	1.1
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	203	8.2	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	208	9.1	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.4	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	8.6	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	8.2	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	7.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	9.1	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	6.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	7.4	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	7.8	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	7.7	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.0	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	8.2	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	9.1	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	210	8.4	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	202	8.6	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	204	7.8	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	197	9.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	190	8.2	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.3	1.1

[0208] [表50]

$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	8.4	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	6.9	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	207	8.1	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	190	6.9	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	7.7	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	210	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	9.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	195	8.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	203	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	203	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	208	6.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	200	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	8.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	207	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	190	7.8	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	198	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	9.1	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	210	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	206	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	205	7.8	0.9
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	195	8.2	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	8.3	1.3

[0209] [表51]

$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	203	8.6	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	8.7	0.7
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	208	8.3	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	9.0	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.1	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	207	8.0	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	7.8	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	7.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	9.0	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	8.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	7.9	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	6.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	8.1	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	6.9	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	195	7.4	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.8	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	203	7.7	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	8.0	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	208	8.2	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	9.1	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	8.4	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	8.6	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	8.2	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	6.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	7.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	202	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	204	8.4	1.1

[0210] [表52]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	197	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	9.0	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	207	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.2	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	7.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	195	7.7	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	8.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	203	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.9	1.0
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	8.4	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	208	8.6	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	7.8	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	9.0	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	8.2	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	8.3	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	8.6	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.7	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	8.3	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	9.0	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	207	7.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	8.1	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.0	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	7.8	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	7.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	9.0	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	8.2	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	7.9	0.9

[0211] [表53]

$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	6.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	195	8.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	6.9	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	203	7.4	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	7.8	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	208	7.7	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.0	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	8.2	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	8.6	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	6.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	7.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	202	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	204	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	197	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	7.8	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	9.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	207	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	8.3	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	8.7	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	8.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.0	1.0

[0212] [表54]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	195	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.2	1.2
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.8	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	203	7.5	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	208	8.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	7.9	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	6.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	9.0	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	7.8	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	7.5	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.6	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	207	6.9	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	8.1	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	6.9	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	7.4	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	7.8	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	7.7	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	8.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	7.9	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	9.1	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	195	8.4	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	8.6	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	203	8.2	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	7.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	208	8.6	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	9.1	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	8.2	1.4

[0213] [表55]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	9.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	202	8.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	204	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	197	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.4	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	207	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	190	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	198	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	199	8.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	201	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	206	7.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	205	8.1	1.3
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	195	7.8	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	7.2	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	9.0	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	8.2	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	6.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	208	8.1	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	6.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	7.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	7.8	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	7.7	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	8.0	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	8.2	1.2

[0214] [表56]

$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	9.1	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.4	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	8.6	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	205	7.9	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	8.6	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	9.1	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	6.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	7.4	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	210	7.8	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	202	7.7	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	204	8.0	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	197	8.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	190	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.6	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	207	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	190	9.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	210	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	205	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	195	9.1	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	6.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	7.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	7.7	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	208	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	8.4	1.1

[0215] [表57]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	208	8.3	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.7	1.0
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	9.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	7.9	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	8.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	8.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	7.8	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	7.2	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	9.0	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	8.2	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	205	7.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	6.9	0.7
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.1	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	6.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	7.4	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	210	7.8	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	202	7.7	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	204	8.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	197	8.2	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	190	7.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	9.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.4	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.6	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	207	8.2	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	190	7.9	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	9.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	6.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	210	7.4	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	7.8	1.3

[0216] [表58]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	207	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	190	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	9.1	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.6	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	210	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	205	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	8.3	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	195	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	8.7	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	208	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	7.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	9.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	205	7.5	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	8.2	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	207	6.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	190	9.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	190	7.8	1.2
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.6	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.2	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	210	7.9	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	6.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	205	8.1	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	6.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	195	7.4	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	7.8	1.1

[0217] [表59]

$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	7.7	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	208	8.2	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	9.1	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	8.4	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	8.2	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	7.9	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.6	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	9.1	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	6.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	205	7.4	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	7.8	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	7.7	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	8.0	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	210	7.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	202	9.1	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	204	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	190	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	9.0	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	207	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	190	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	210	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	205	8.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	195	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	8.2	0.9

[0218] [表60]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	203	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	201	8.7	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	208	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	7.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	8.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	8.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	200	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	7.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	9.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	198	8.2	1.2
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	6.9	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.1	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	6.9	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.4	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.8	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	7.7	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	8.0	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	210	8.2	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	202	7.9	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	204	9.1	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	197	8.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	8.6	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	8.6	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	207	9.1	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	6.9	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.8	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	7.7	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	210	8.0	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.2	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	9.1	1.0

[0219] [表61]

$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	195	8.4	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	8.6	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	203	7.8	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	8.3	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	208	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	203	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	9.1	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	203	6.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	7.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	208	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	8.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.4	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.6	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.3	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.7	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	210	8.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	202	8.0	1.1
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	197	7.2	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	9.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.2	1.2

[0220] [表62]

$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.9	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	6.9	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	207	8.1	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	208	6.9	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.4	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.8	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	7.7	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	8.2	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.9	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	9.1	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.4	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	207	8.6	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	8.2	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.9	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	8.6	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	9.1	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	210	6.9	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	7.4	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	7.8	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.7	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	195	8.0	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	8.2	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	203	7.9	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.3	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	8.7	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.1	0.9

[0221] [表63]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	8.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	210	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	202	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	204	7.5	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	197	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	207	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	7.5	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	210	6.9	1.1
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	6.9	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.4	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	195	7.8	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	7.7	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	203	8.0	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	8.2	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	203	7.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	9.1	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	208	8.4	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.6	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	8.2	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	7.9	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	9.1	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	6.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	7.4	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.8	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	207	7.7	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	8.0	0.9

[0222] [表64]

$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	8.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	9.1	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	8.4	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	210	8.6	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	9.0	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.2	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	195	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	203	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	208	9.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.4	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	8.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	7.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	7.5	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	206	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	7.8	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	210	7.5	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	202	8.6	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	204	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	197	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	6.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	199	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	201	7.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	207	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	190	7.7	1.0

[0223] [表65]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	198	8.0	1.3
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	7.9	0.7
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	210	9.1	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	8.4	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	205	8.6	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.2	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	195	7.9	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.6	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	9.1	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	6.9	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	7.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	7.8	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	208	7.7	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.0	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.2	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	9.1	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.4	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	8.6	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	7.8	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	9.0	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	9.1	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	8.4	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	205	8.6	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	7.8	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	9.0	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.4	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	202	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	204	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	197	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	190	8.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	9.0	0.9

[0224] [表66]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	207	8.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	190	8.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	7.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	210	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	7.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	205	6.9	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	195	6.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	7.4	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	8.0	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	208	7.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	9.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	7.9	1.1
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	9.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	208	6.9	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	7.4	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	7.8	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	7.7	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.2	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	7.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	9.1	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.4	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.6	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	7.8	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	9.0	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	205	8.2	1.2

[0225] [表67]

$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.3	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.4	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.6	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.2	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	210	7.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	202	8.6	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	204	9.1	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	197	6.9	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	190	7.4	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	7.8	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	7.7	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	8.0	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	207	8.2	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	190	7.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	210	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.2	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	208	8.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.3	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	8.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	8.0	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	7.8	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	7.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	9.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	205	7.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	6.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	7.4	0.9

[0226] [表68]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	210	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	202	7.7	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	204	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	197	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	190	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	9.1	0.8
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	8.6	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	207	8.2	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	190	7.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.6	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	9.1	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	6.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	210	7.4	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	205	7.7	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	195	8.2	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	7.9	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	9.1	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.4	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	7.8	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	208	9.0	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.2	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.3	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.6	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.7	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.3	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	9.0	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	7.9	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.1	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.0	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	7.8	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	7.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	7.8	1.1

[0227] [表69]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	7.5	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	210	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	202	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	204	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	197	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	190	7.5	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	207	6.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	190	8.1	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	199	7.4	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	210	7.7	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	205	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	7.9	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	195	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.4	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	200	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	203	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	201	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	208	9.1	1.1
$\text{Bi}_2\text{Sr}_2\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	7.8	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	203	7.7	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.0	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	203	8.2	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	208	9.1	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	8.4	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.6	1.3

[0228] [表70]

$\text{Bi}_2\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	7.8	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	9.0	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	9.1	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	8.4	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.2	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	9.0	0.8
$\text{Bi}_2\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	8.2	1.0
$\text{Bi}_2\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	205	7.9	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	6.9	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.1	1.3
$\text{Bi}_2\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	6.9	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.4	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	210	7.8	1.4
$\text{Bi}_2\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	202	7.7	1.2
$\text{Bi}_2\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	204	8.0	0.9
$\text{Bi}_2\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	197	8.2	1.1
$\text{Bi}_2\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	190	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_2\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	207	8.2	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	190	7.9	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	8.6	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	210	7.4	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	7.8	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	7.7	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	8.4	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	205	8.6	0.7
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.8	1.3

[0229] [表71]

$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	9.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.3	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	210	8.4	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	202	8.6	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	204	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	197	7.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	190	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	9.1	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	6.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Sr}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	7.4	1.2
$\text{Bi}_2\text{Ca}_2\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	190	7.7	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	8.0	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.2	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	7.9	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	210	9.1	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	8.4	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	205	8.6	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.8	0.8
$\text{Bi}_2\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	195	9.0	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.2	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	203	8.3	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.6	1.0
$\text{Bi}_2\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	203	8.7	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	8.3	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	208	9.0	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.1	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.8	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	7.2	1.2
$\text{Bi}_2\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	9.0	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	8.2	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.9	1.4
$\text{Bi}_2\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	6.9	1.1
$\text{Bi}_2\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.1	1.0

[0230] [表72]

$\text{Bi}_2\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	6.9	1.3
$\text{Bi}_2\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	205	7.4	0.9
$\text{Bi}_2\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_2\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	210	7.9	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	202	9.1	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	204	8.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	197	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	190	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.9	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.6	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	207	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	190	7.4	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.8	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.7	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ba}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	8.0	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	210	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	7.9	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	205	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	8.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	195	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	7.8	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	203	9.0	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.2	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	203	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	8.6	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	208	8.7	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	8.3	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ca}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	9.0	1.2
$\text{Bi}_2\text{Ba}_2\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	203	8.1	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.0	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	203	7.8	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	7.2	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	208	9.0	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.8	0.7

[0231] [表73]

$\text{Bi}_2\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.5	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.6	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.2	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	7.9	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	6.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	9.0	0.8
$\text{Bi}_2\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.8	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.5	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.6	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	8.2	1.0
$\text{Bi}_2\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	205	7.9	1.3
$\text{Bi}_2\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	6.9	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.1	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	6.9	1.4
$\text{Bi}_2\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.4	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	210	7.8	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	202	7.7	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	204	8.0	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	197	8.2	0.9
$\text{Bi}_2\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	190	7.9	1.1
$\text{Bi}_2\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	9.1	1.2
$\text{Bi}_2\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.4	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_2\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	207	8.2	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Na}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	190	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{K}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Li}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	9.1	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ti}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	6.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{V}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	210	7.4	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	7.8	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Mn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	7.7	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Fe}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	203	8.0	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ni}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	201	8.2	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Cu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	208	7.9	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Zn}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	9.1	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.4	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ca}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.6	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	7.8	1.2

[0232] [表74]

$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Al}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	9.0	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Y}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	8.2	0.8
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{La}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	9.1	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ce}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	8.4	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Pr}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	8.6	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Nd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	205	7.8	1.0
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Sm}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	198	9.0	1.3
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Eu}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	7.8	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Gd}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	200	7.5	1.1
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Dy}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	199	8.6	1.4
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Ho}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	210	8.2	1.2
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Er}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	202	7.9	0.9
$\text{Bi}_2\text{Pb}_{0.2}\text{Ba}_{1.8}\text{Yb}_{0.2}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	204	6.9	1.1
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_2\text{O}_9$	199	8.6	1.2
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	201	8.2	1.0
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	207	7.9	1.3
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{Cr}_{0.1}\text{O}_9$	190	6.9	1.0
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	198	8.1	0.9
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	199	6.9	1.1
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	201	7.4	1.0
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	210	7.8	1.2
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	206	7.7	1.1
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	205	8.0	1.0
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	198	8.2	0.9
$\text{Bi}_2\text{Sr}_{1.9}\text{Na}_{0.1}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	195	7.9	1.1
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_2\text{O}_9$	203	8.4	1.2
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{Ti}_{0.1}\text{O}_9$	200	8.6	1.1
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{V}_{0.1}\text{O}_9$	203	8.2	0.9
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{Cr}_{0.1}\text{O}_9$	201	7.9	0.8
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{Mn}_{0.1}\text{O}_9$	208	8.6	1.0
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{Fe}_{0.1}\text{O}_9$	198	9.1	1.3
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{Cu}_{0.1}\text{O}_9$	199	6.9	1.2
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{Ag}_{0.1}\text{O}_9$	200	7.4	1.3
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{Mo}_{0.1}\text{O}_9$	199	7.8	1.0
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{W}_{0.1}\text{O}_9$	200	7.7	0.8
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{Nb}_{0.1}\text{O}_9$	206	8.0	1.1
$\text{Bi}_2\text{Sr}_{1.9}\text{K}_{0.1}\text{Co}_{1.9}\text{Ta}_{0.1}\text{O}_9$	206	8.2	1.2

[0233] 以上の結果から明らかなように、表7―表74に示された各酸化物は、p型熱電変換材料として優れた特性を有し、導電性も良好である。従って、上記各実施例におけるp型熱電変換材料に代えて、これらの酸化物を用いる場合にも、良好な熱電発電性能が発揮されるものと考えられる。

[0234] 参考例2

一般式： $\text{Ln} \text{R}^1_{\text{m}} \text{Ni} \text{R}^2_{\text{n}} \text{O}$ 又は一般式： $(\text{Ln} \text{R}^3_{\text{s}}) \text{Ni} \text{R}^4_{\text{t}2} \text{O}$ で表されるn型熱電変換材料としての特性を有する複合酸化物を下記の方法で作製した。

[0235] 原料物質としては、目的とする複合酸化物の構成元素を含む硝酸塩を用い、表75―表121に記載した各組成式と同じ元素比となる割合で、各原料物質を蒸留水に完全に溶解し、アルミナるつぼ中で十分に攪拌混合した後、水分を蒸発させて乾固した。次いで、電気炉を用いて、析出物を空気中で600℃で10時間焼成して、硝酸塩を分解した。その後、焼成物を粉碎し、加圧成形後、300mL／分の酸素気流中で20時間焼成して複合酸化物を合成した。焼成温度及び焼成時間については、目的とする酸化物が生成するように700～1100℃の範囲で適宜変更した。

[0236] 下記表75―表121に、得られた各複合酸化物における元素比、700℃におけるゼーベック係数、700℃における電気抵抗率、及び700℃における熱伝導度を示す。

[0237] [表75]

n 型

組成 $\text{Ln}_m\text{R}^1_n\text{Ni}_p\text{R}^2_q\text{O}_r$	ゼーベック係数 $\mu\text{V/K}$ (700°C)	電気抵抗率 $\text{m}\Omega\text{cm}$ (700°C)	熱伝導度 W/mK (700°C)
LaNiO_3	-22	2.2	4.2
CeNiO_3	-19	1.9	4.1
PrNiO_3	-25	1.8	3.9
NdNiO_3	-30	2.9	4.0
SmNiO_3	-28	3.1	3.8
EuNiO_3	-27	2.2	3.7
GdNiO_3	-25	2.1	4.0
DyNiO_3	-18	3.0	3.9
HoNiO_3	-22	2.8	3.6
ErNiO_3	-10	3.2	4.1
YbNiO_3	-26	3.1	3.9
$\text{La}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-19	2.4	4.3
$\text{La}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-17	2.8	4.0
$\text{La}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-23	2.9	4.7
$\text{La}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-22	3.0	4.2
$\text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-18	2.8	4.3
	-20	3.5	4.9
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-21	4.0	3.9
$\text{Ce}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-21	3.9	4.2
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-22	2.1	4.0
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-18	2.6	4.7
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-25	2.8	4.6
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-28	3.9	4.2
$\text{Pr}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-19	3.8	4.7
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-20	2.7	4.8
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-26	1.9	4.1
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-23	2.8	3.8
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-19	3.4	4.6
$\text{Nd}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-17	2.8	4.2
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-20	3.0	4.5
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-22	2.9	4.3

[0238] [表76]

$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-20	1.8	4.2
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-23	3.1	3.9
$\text{Sm}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-18	2.2	4.0
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-28	2.1	3.8
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-19	3.0	3.7
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-24	2.8	4.0
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-16	3.1	3.6
$\text{Eu}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-20	3.0	4.1
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-22	2.4	3.9
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-24	2.8	4.6
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-23	2.9	4.3
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-28	2.8	4.7
$\text{Gd}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-19	3.5	4.2
$\text{Gd}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-21	4.0	4.3
$\text{Gd}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-22	3.9	4.9
$\text{Gd}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-24	2.1	3.9
$\text{Dy}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-29	2.8	4.0
$\text{Dy}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-17	2.7	4.7
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-18	3.9	4.6
$\text{Dy}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-24	3.8	4.5
$\text{Dy}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-22	2.7	4.2
$\text{Ho}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-27	2.8	4.8
$\text{Ho}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-21	3.7	4.1
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-23	3.4	3.8
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-19	2.8	4.0
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-23	3.0	4.6
$\text{Er}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-25	2.2	4.5
$\text{Er}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-16	1.9	4.3
$\text{Er}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-20	1.8	4.1
$\text{Er}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-22	2.9	3.9
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-29	3.1	4.0

[0239] [表77]

$\text{Yb}_{0.9}\text{Na}_{0.1}\text{NiO}_3$	-22	2.2	3.8
$\text{Yb}_{0.9}\text{K}_{0.1}\text{NiO}_3$	-19	2.1	3.7
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{NiO}_3$	-25	3.0	4.0
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{NiO}_3$	-30	2.8	3.9
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$	-28	3.2	3.6
$\text{LaNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-25	3.0	3.9
$\text{LaNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-18	2.4	4.6
$\text{LaNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	2.8	4.3
$\text{LaNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-10	2.9	4.0
$\text{LaNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-26	3.0	4.7
$\text{LaNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-20	2.8	4.2
$\text{LaNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-19	3.5	4.3
$\text{LaNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-17	4.0	4.9
$\text{LaNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-23	3.9	3.9
$\text{LaNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-22	2.1	4.2
$\text{LaNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-18	2.6	4.0
$\text{CeNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-21	2.7	4.6
$\text{CeNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-21	3.9	4.5
$\text{CeNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	3.8	4.2
$\text{CeNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-18	2.7	4.7
$\text{CeNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-25	1.9	4.8
$\text{CeNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-24	2.8	4.1
$\text{CeNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-28	3.7	3.8
$\text{CeNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-19	3.4	4.0
$\text{CeNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-20	2.8	4.6
$\text{CeNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-26	3.0	4.2
$\text{CeNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-23	2.9	4.5
$\text{PrNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-19	2.9	4.2
$\text{PrNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-17	3.1	4.1
$\text{PrNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-20	2.2	3.9
$\text{PrNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	2.1	4.0
$\text{PrNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	3.0	3.8
$\text{PrNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-21	2.8	3.7
$\text{PrNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-23	3.2	4.0

[0240] [表78]

$\text{PrNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-18	3.1	3.9
$\text{PrNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-28	3.0	3.6
$\text{PrNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-19	2.4	4.1
$\text{PrNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-24	2.8	3.9
$\text{NdNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-16	3.0	4.3
$\text{NdNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	2.8	4.0
$\text{NdNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	3.5	4.7
$\text{NdNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-24	4.0	4.2
$\text{NdNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-23	3.9	4.3
$\text{NdNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-26	2.1	4.9
$\text{NdNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-28	2.6	3.9
$\text{NdNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-19	2.2	4.2
$\text{NdNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-21	1.9	4.0
$\text{NdNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-22	1.8	4.7
$\text{NdNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-24	2.9	4.6
$\text{SmNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-29	2.2	4.2
$\text{SmNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-17	2.1	4.7
$\text{SmNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-18	3.0	4.8
$\text{SmNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-24	2.8	4.1
$\text{SmNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-22	3.2	3.8
$\text{SmNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-21	3.1	4.0
$\text{SmNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-27	3.0	4.6
$\text{SmNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-25	2.4	4.2
$\text{SmNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-30	2.8	4.1
$\text{SmNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-28	2.9	3.9
$\text{SmNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-27	3.0	4.0
$\text{EuNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-18	3.5	3.7
$\text{EuNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	4.0	4.0
$\text{EuNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-10	3.9	3.9
$\text{EuNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-26	2.1	3.6
$\text{EuNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	2.6	4.1
$\text{EuNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-19	2.8	3.9
$\text{EuNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-17	2.7	4.6
$\text{EuNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-23	3.9	4.3

[0241] [表79]

$\text{EuNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	3.8	4.0
$\text{EuNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-18	2.7	4.7
$\text{EuNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-20	1.9	4.2
$\text{GdNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-21	3.7	4.9
$\text{GdNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	3.4	3.9
$\text{GdNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-18	2.8	4.2
$\text{GdNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-25	3.0	4.0
$\text{GdNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-24	2.9	4.7
$\text{GdNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-28	1.8	4.6
$\text{GdNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-19	2.9	4.5
$\text{GdNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-20	3.1	4.2
$\text{GdNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-26	2.2	4.7
$\text{GdNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-23	2.1	4.8
$\text{GdNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-22	3.0	4.1
$\text{DyNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-17	3.2	4.0
$\text{DyNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	3.1	4.6
$\text{DyNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	3.0	4.2
$\text{DyNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-20	2.4	4.5
$\text{DyNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-21	2.8	4.3
$\text{DyNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-23	2.9	4.2
$\text{DyNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-18	3.0	4.1
$\text{DyNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-28	2.8	3.9
$\text{DyNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	3.5	4.0
$\text{DyNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	4.0	3.8
$\text{DyNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-25	3.9	3.7
$\text{HoNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-20	2.6	3.9
$\text{HoNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	2.8	3.6
$\text{HoNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-24	2.7	4.1
$\text{HoNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-23	3.9	3.9
$\text{HoNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-26	1.8	4.6
$\text{HoNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-28	2.9	4.3
$\text{HoNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-19	3.1	4.0
$\text{HoNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-21	2.2	4.7
$\text{HoNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	2.1	4.2

[0242] [表80]

$\text{HoNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	3.0	4.3
$\text{HoNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-21	2.8	4.9
$\text{ErNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-17	3.1	4.2
$\text{ErNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-18	3.0	4.0
$\text{ErNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-24	2.4	4.7
$\text{ErNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	2.8	4.6
$\text{ErNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-21	2.9	4.5
$\text{ErNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-27	3.0	4.2
$\text{ErNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-21	2.8	4.7
$\text{ErNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-23	3.5	4.8
$\text{ErNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	4.0	4.1
$\text{ErNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-23	3.9	3.8
$\text{ErNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-24	2.1	4.0
$\text{YbNi}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-16	2.8	4.2
$\text{YbNi}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	2.7	4.5
$\text{YbNi}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	3.9	4.3
$\text{YbNi}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-29	3.8	4.1
$\text{YbNi}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-28	2.7	3.9
$\text{YbNi}_{0.9}\text{Co}_{0.1}\text{O}_3$	-27	1.9	4.0
$\text{YbNi}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-25	2.8	3.8
$\text{YbNi}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-18	3.7	3.7
$\text{YbNi}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	3.4	4.0
$\text{YbNi}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-10	2.8	3.9
$\text{YbNi}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-26	3.0	3.6
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-19	1.8	3.9
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-17	2.9	4.6
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-23	3.1	4.3
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	2.2	4.0
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-18	2.1	4.7
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-20	3.0	4.2
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-21	2.8	4.3
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-21	3.2	4.9
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	3.1	3.9
$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-18	3.0	4.2

[0243] [表81]

$\text{La}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-25	2.4	4.0
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-28	2.9	4.6
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-19	3.0	4.5
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-20	2.8	4.2
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-26	3.5	4.7
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-23	4.0	4.8
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-22	3.9	4.1
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-19	2.1	3.8
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-17	2.6	4.0
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-20	2.8	4.6
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-22	2.7	4.2
$\text{La}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-20	3.9	4.5
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-23	2.7	4.2
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-18	1.9	4.1
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-28	2.8	3.9
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-19	3.7	4.0
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-24	3.4	3.8
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-25	2.8	3.7
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-16	3.0	4.0
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-20	2.9	3.9
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	2.2	3.6
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	1.9	4.1
$\text{La}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-23	1.8	3.9
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-28	3.1	4.3
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-19	2.2	4.0
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-21	2.1	4.7
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	3.0	4.2
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-24	2.8	4.3
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-21	3.2	4.9
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-29	3.1	3.9
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-17	3.0	4.2
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-18	2.4	4.0
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	2.8	4.7
$\text{La}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-22	2.9	4.6

[0244] [表82]

$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-21	3.0	4.5
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-27	2.8	4.2
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-21	3.5	4.7
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-23	4.0	4.8
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-19	3.9	4.1
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-23	2.1	3.8
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-24	2.6	4.0
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-25	2.8	4.6
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-16	2.7	4.0
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-20	3.9	4.7
$\text{La}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-22	3.8	4.2
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-18	1.9	4.9
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	2.8	3.9
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-10	3.7	4.2
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-26	3.4	4.0
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	2.8	4.7
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-19	3.0	4.6
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-17	2.9	4.5
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-23	1.8	4.2
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	2.9	4.7
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-18	3.1	4.8
$\text{Ce}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-20	2.2	4.1
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-21	3.0	4.0
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	2.8	4.6
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-18	3.2	4.2
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-25	3.1	4.5
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-24	3.0	4.3
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-28	2.4	4.2
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-19	2.8	4.1
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-20	2.9	3.9
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-26	3.0	4.0
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-23	2.8	3.8
$\text{Ce}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-22	3.5	3.7
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-17	3.9	3.9

[0245] [表83]

$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	2.1	3.6
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	2.6	4.1
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-20	2.2	3.9
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-21	1.9	4.6
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-23	1.8	4.3
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-18	2.9	4.0
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-28	3.1	4.7
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	2.2	4.2
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	2.1	4.3
$\text{Ce}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-25	3.0	4.9
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-20	3.2	4.2
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	3.1	4.0
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-24	3.0	4.7
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-23	2.4	4.6
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-26	2.8	4.5
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-28	2.9	4.2
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-19	3.0	4.7
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-21	2.8	4.8
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	3.5	4.1
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	4.0	3.8
$\text{Ce}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-21	3.9	4.0
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-29	2.1	4.6
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-17	2.6	4.2
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-18	2.8	4.5
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-24	2.7	4.3
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-22	3.9	4.1
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-21	3.8	3.9
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-27	2.7	4.0
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-21	1.9	3.8
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-23	2.8	3.7
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-19	3.7	4.0
$\text{Ce}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-23	3.4	3.9
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-25	3.0	4.1
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-16	2.9	3.9
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-20	1.8	4.6

[0246] [表84]

$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	2.9	4.3
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-29	3.1	4.0
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-22	2.2	4.7
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-19	2.1	4.2
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-25	3.0	4.3
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-30	2.8	4.9
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-28	3.2	3.9
$\text{Pr}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-27	3.1	4.2
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-18	2.4	4.7
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	2.8	4.6
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-10	2.9	4.5
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-26	3.0	4.2
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	2.8	4.7
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-19	3.5	4.8
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-17	4.0	4.1
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-23	3.9	3.8
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	2.1	4.0
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-18	2.6	4.6
$\text{Pr}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-20	2.8	4.2
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-21	2.9	4.3
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	3.1	4.2
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-18	2.2	4.1
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-25	2.1	3.9
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-24	3.0	4.0
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-28	2.8	3.8
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-19	3.2	3.7
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-20	3.1	4.0
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-26	3.0	3.9
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-23	2.4	3.6
$\text{Pr}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-22	2.8	4.1
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-17	3.0	4.6
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	2.8	4.3
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	3.5	4.0
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-20	4.0	4.7

[0247] [表85]

$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-21	3.9	4.2
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-23	2.1	4.3
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-18	2.6	4.9
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-28	2.8	3.9
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	2.7	4.2
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	3.9	4.0
$\text{Pr}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-25	3.8	4.7
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-16	2.7	4.6
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	1.9	4.5
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	2.8	4.2
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-24	3.7	4.7
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-23	3.4	4.8
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-26	2.8	4.1
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-28	3.0	3.8
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-19	2.9	4.1
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-21	1.8	3.9
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-22	2.9	4.6
$\text{Pr}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-24	3.1	4.3
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-29	2.1	4.7
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-17	3.0	4.2
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-18	2.8	4.3
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-24	3.2	4.9
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-22	3.1	3.9
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-21	3.0	4.2
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-27	2.4	4.0
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-25	2.8	4.7
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-30	2.9	4.6
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-28	3.0	4.5
$\text{Nd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-27	2.8	4.2
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-18	4.0	4.8
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	3.9	4.1
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-10	2.1	3.8
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-26	2.6	4.0
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	2.2	4.6
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-19	1.9	4.2

[0248] [表86]

$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-17	1.8	4.5
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-23	2.9	4.3
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	3.1	4.1
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-18	2.2	3.9
$\text{Nd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-20	2.1	4.0
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-21	2.8	3.7
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	3.2	4.0
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-18	3.1	3.9
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-25	3.0	3.6
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-24	2.4	4.1
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-28	2.8	3.9
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-19	2.9	4.6
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-20	3.0	4.3
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-26	2.8	4.0
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-23	3.5	4.7
$\text{Nd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-22	4.0	4.2
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-17	2.1	4.9
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	2.6	3.9
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	2.8	4.2
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-20	2.7	4.0
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-21	3.9	4.7
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-23	3.8	4.6
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-18	2.7	4.5
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-28	1.9	4.2
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	2.8	4.7
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	3.7	4.8
$\text{Nd}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-25	3.4	4.1
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-16	2.8	3.8
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	3.0	4.0
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	2.9	4.6
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-24	1.8	4.2
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-23	2.9	4.5
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-26	3.1	4.3
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-28	2.2	4.2
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-19	2.1	4.1

[0249] [表87]

$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-21	3.0	3.9
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-22	2.8	4.0
$\text{Nd}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-24	3.2	3.8
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-29	3.0	4.0
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-17	2.4	3.9
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-18	2.8	3.6
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-24	2.9	4.1
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-22	3.0	3.9
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-21	2.8	4.6
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-27	3.5	4.3
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-21	4.0	4.0
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-23	3.9	4.7
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-19	2.1	4.2
$\text{Sm}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-23	2.6	4.3
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-25	2.7	3.9
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-16	3.9	4.2
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-20	1.8	4.0
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	2.9	4.7
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-22	3.1	4.6
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-10	2.2	4.5
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-26	2.1	4.2
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-20	3.0	4.7
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	2.8	4.8
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-17	3.2	4.1
$\text{Sm}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-23	3.1	3.8
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-18	2.4	4.0
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	2.8	4.7
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-21	2.9	4.2
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-21	3.0	4.3
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-22	2.8	4.9
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-18	3.5	3.9
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-25	4.0	4.2
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-24	3.9	4.0
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-28	2.1	4.7

[0250] [表88]

$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-19	2.6	4.6
$\text{Sm}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-20	2.8	4.5
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-23	3.9	4.7
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	3.8	4.8
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-19	2.7	4.1
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-17	1.9	3.8
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	2.8	4.0
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-22	3.7	4.6
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-20	3.4	4.2
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-21	2.8	4.5
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-23	3.0	4.3
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-18	2.9	4.2
$\text{Sm}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-28	1.8	4.1
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-19	2.9	3.9
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-24	3.1	4.0
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-25	2.2	3.8
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-16	2.1	3.7
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	3.0	4.0
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-22	2.8	3.9
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-24	3.2	3.6
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-23	3.1	4.1
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-26	3.0	3.9
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-28	2.4	4.6
$\text{Sm}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-19	2.8	4.3
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-22	3.0	4.7
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-24	2.8	4.2
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-21	3.5	4.3
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-29	4.0	4.9
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-17	3.9	3.9
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-18	2.1	4.2
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-24	2.6	4.0
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-22	2.8	4.7
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-21	2.7	4.6
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-27	3.9	4.5
$\text{Eu}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-21	3.8	4.2

[0251] [表89]

$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-19	1.9	4.8
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-23	2.8	4.1
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-24	3.7	3.8
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-25	3.4	4.1
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-16	2.8	3.9
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-20	3.0	4.6
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-22	2.9	4.3
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-29	2.2	4.0
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-22	1.9	4.7
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-19	1.8	4.2
$\text{Eu}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-25	2.9	4.3
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-28	2.2	3.9
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-27	2.1	4.2
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-25	3.0	4.0
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-18	2.8	4.7
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-22	3.2	4.6
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-10	3.1	4.5
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-26	3.0	4.2
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-20	2.4	4.7
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	2.8	4.8
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-17	2.9	4.1
$\text{Eu}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-23	3.0	3.8
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-18	3.5	4.6
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	4.0	4.2
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-21	3.9	4.5
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-21	2.1	4.3
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-22	2.6	4.1
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-18	2.8	3.9
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-25	2.7	4.0
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-24	3.9	3.8
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-28	3.8	3.7
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-19	2.7	4.0
$\text{Eu}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-20	1.9	3.9
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-26	2.8	3.6

[0252] [表90]

$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-23	3.7	4.1
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	3.4	3.9
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-19	2.8	4.6
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-17	3.0	4.3
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-20	2.9	4.0
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-22	1.8	4.7
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-20	2.9	4.2
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-21	3.1	4.3
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-23	2.2	4.9
$\text{Eu}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-18	2.1	3.9
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-19	2.8	4.0
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-24	3.2	4.7
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-25	3.1	4.6
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-16	3.0	4.5
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	2.4	4.2
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-22	2.8	4.7
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-24	2.9	4.8
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-23	3.0	4.1
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-26	2.8	3.8
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-28	3.5	4.0
$\text{Gd}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-19	4.0	4.6
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-22	2.1	4.5
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-24	2.6	4.3
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-21	2.2	4.2
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-29	1.9	4.1
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-17	1.8	3.9
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-18	2.9	4.0
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-24	3.1	3.8
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-22	2.2	3.7
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-21	2.1	4.0
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-27	3.0	3.9
$\text{Gd}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-25	2.8	3.6
$\text{Gd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-28	3.1	3.9
$\text{Gd}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-27	3.0	4.6

[0253] [表91]

$Gd_{0.9}Sr_{0.1}Ni_{0.9}Cr_{0.1}O_3$	-25	2.4	4.3
$Gd_{0.9}Sr_{0.1}Ni_{0.9}Mn_{0.1}O_3$	-18	2.8	4.0
$Gd_{0.9}Sr_{0.1}Ni_{0.9}Fe_{0.1}O_3$	-22	2.9	4.7
$Gd_{0.9}Sr_{0.1}Ni_{0.9}Co_{0.1}O_3$	-10	3.0	4.2
$Gd_{0.9}Sr_{0.1}Ni_{0.9}Cu_{0.1}O_3$	-26	2.8	4.3
$Gd_{0.9}Sr_{0.1}Ni_{0.9}Mo_{0.1}O_3$	-20	3.5	4.9
$Gd_{0.9}Sr_{0.1}Ni_{0.9}W_{0.1}O_3$	-19	4.0	3.9
$Gd_{0.9}Sr_{0.1}Ni_{0.9}Nb_{0.1}O_3$	-17	3.9	4.2
$Gd_{0.9}Sr_{0.1}Ni_{0.9}Ta_{0.1}O_3$	-23	2.1	4.0
$Gd_{0.9}Ca_{0.1}Ni_{0.9}Ti_{0.1}O_3$	-18	2.8	4.6
$Gd_{0.9}Ca_{0.1}Ni_{0.9}V_{0.1}O_3$	-20	2.7	4.5
$Gd_{0.9}Ca_{0.1}Ni_{0.9}Cr_{0.1}O_3$	-21	3.9	4.2
$Gd_{0.9}Ca_{0.1}Ni_{0.9}Mn_{0.1}O_3$	-21	3.8	4.7
$Gd_{0.9}Ca_{0.1}Ni_{0.9}Fe_{0.1}O_3$	-22	2.7	4.8
$Gd_{0.9}Ca_{0.1}Ni_{0.9}Co_{0.1}O_3$	-18	1.9	4.1
$Gd_{0.9}Ca_{0.1}Ni_{0.9}Cu_{0.1}O_3$	-25	2.8	3.8
$Gd_{0.9}Ca_{0.1}Ni_{0.9}Mo_{0.1}O_3$	-24	3.7	3.9
$Gd_{0.9}Ca_{0.1}Ni_{0.9}W_{0.1}O_3$	-28	3.4	4.6
$Gd_{0.9}Ca_{0.1}Ni_{0.9}Nb_{0.1}O_3$	-19	2.8	4.3
$Gd_{0.9}Ca_{0.1}Ni_{0.9}Ta_{0.1}O_3$	-20	3.0	4.0
$Gd_{0.9}Bi_{0.1}Ni_{0.9}Ti_{0.1}O_3$	-26	2.9	4.7
$Gd_{0.9}Bi_{0.1}Ni_{0.9}V_{0.1}O_3$	-23	1.8	4.2
$Gd_{0.9}Bi_{0.1}Ni_{0.9}Cr_{0.1}O_3$	-22	2.9	4.3
$Gd_{0.9}Bi_{0.1}Ni_{0.9}Mn_{0.1}O_3$	-19	3.1	4.9
$Gd_{0.9}Bi_{0.1}Ni_{0.9}Fe_{0.1}O_3$	-17	2.2	3.9
$Gd_{0.9}Bi_{0.1}Ni_{0.9}Co_{0.1}O_3$	-20	2.1	4.2
$Gd_{0.9}Bi_{0.1}Ni_{0.9}Cu_{0.1}O_3$	-22	3.0	4.0
$Gd_{0.9}Bi_{0.1}Ni_{0.9}Mo_{0.1}O_3$	-20	2.8	4.7
$Gd_{0.9}Bi_{0.1}Ni_{0.9}W_{0.1}O_3$	-21	3.2	4.6
$Gd_{0.9}Bi_{0.1}Ni_{0.9}Nb_{0.1}O_3$	-23	3.1	4.5
$Gd_{0.9}Bi_{0.1}Ni_{0.9}Ta_{0.1}O_3$	-18	3.0	4.2
$Dy_{0.9}Na_{0.1}Ni_{0.9}Ti_{0.1}O_3$	-19	2.8	4.8
$Dy_{0.9}Na_{0.1}Ni_{0.9}V_{0.1}O_3$	-24	2.9	4.1
$Dy_{0.9}Na_{0.1}Ni_{0.9}Cr_{0.1}O_3$	-25	3.0	3.8
$Dy_{0.9}Na_{0.1}Ni_{0.9}Mn_{0.1}O_3$	-16	2.8	4.3

[0254] [表92]

$\text{Dy}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	3.5	4.0
$\text{Dy}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-22	4.0	4.7
$\text{Dy}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-24	3.9	4.2
$\text{Dy}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-23	2.1	4.3
$\text{Dy}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-26	2.6	4.9
$\text{Dy}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-28	2.8	3.9
$\text{Dy}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-19	2.7	4.2
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-22	2.4	4.7
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-24	2.8	4.6
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-21	2.9	4.5
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-29	3.0	4.2
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-17	2.8	4.7
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-18	3.5	4.8
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-24	4.0	4.1
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-22	3.9	3.8
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-21	2.1	4.0
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-27	2.6	4.6
$\text{Dy}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-21	2.8	4.2
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-19	3.9	4.3
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-23	1.8	4.2
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-24	2.9	4.1
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-25	3.1	3.9
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-16	2.2	4.0
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-21	2.1	3.8
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-23	3.0	3.7
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-19	2.8	4.0
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-23	3.2	3.9
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	3.1	3.6
$\text{Dy}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-25	3.0	4.1
$\text{Dy}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-20	2.8	4.6
$\text{Dy}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-22	2.9	4.3
$\text{Dy}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-29	3.0	4.0
$\text{Dy}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	2.8	4.7
$\text{Dy}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-19	3.5	4.2

[0255] [表93]

Dy _{0.9} Ca _{0.1} Ni _{0.9} Co _{0.1} O ₃	-25	4.0	4.3
Dy _{0.9} Ca _{0.1} Ni _{0.9} Cu _{0.1} O ₃	-30	3.9	4.9
Dy _{0.9} Ca _{0.1} Ni _{0.9} Mo _{0.1} O ₃	-28	2.1	3.9
Dy _{0.9} Ca _{0.1} Ni _{0.9} W _{0.1} O ₃	-27	2.6	4.2
Dy _{0.9} Ca _{0.1} Ni _{0.9} Nb _{0.1} O ₃	-25	2.8	4.0
Dy _{0.9} Ca _{0.1} Ni _{0.9} Ta _{0.1} O ₃	-18	2.7	4.7
Dy _{0.9} Bi _{0.1} Ni _{0.9} Ti _{0.1} O ₃	-22	3.9	4.6
Dy _{0.9} Bi _{0.1} Ni _{0.9} V _{0.1} O ₃	-10	3.8	4.5
Dy _{0.9} Bi _{0.1} Ni _{0.9} Cr _{0.1} O ₃	-26	2.7	4.2
Dy _{0.9} Bi _{0.1} Ni _{0.9} Mn _{0.1} O ₃	-20	1.9	4.7
Dy _{0.9} Bi _{0.1} Ni _{0.9} Fe _{0.1} O ₃	-19	2.8	4.8
Dy _{0.9} Bi _{0.1} Ni _{0.9} Co _{0.1} O ₃	-17	3.7	4.1
Dy _{0.9} Bi _{0.1} Ni _{0.9} Cu _{0.1} O ₃	-23	3.4	3.8
Dy _{0.9} Bi _{0.1} Ni _{0.9} Mo _{0.1} O ₃	-22	2.8	4.1
Dy _{0.9} Bi _{0.1} Ni _{0.9} W _{0.1} O ₃	-18	3.0	3.9
Dy _{0.9} Bi _{0.1} Ni _{0.9} Nb _{0.1} O ₃	-20	2.9	4.6
Dy _{0.9} Bi _{0.1} Ni _{0.9} Ta _{0.1} O ₃	-21	1.8	4.3
Ho _{0.9} Na _{0.1} Ni _{0.9} Ti _{0.1} O ₃	-22	3.1	4.7
Ho _{0.9} Na _{0.1} Ni _{0.9} V _{0.1} O ₃	-18	2.2	4.2
Ho _{0.9} Na _{0.1} Ni _{0.9} Cr _{0.1} O ₃	-25	2.1	4.3
Ho _{0.9} Na _{0.1} Ni _{0.9} Mn _{0.1} O ₃	-24	3.0	4.9
Ho _{0.9} Na _{0.1} Ni _{0.9} Fe _{0.1} O ₃	-28	2.8	3.9
Ho _{0.9} Na _{0.1} Ni _{0.9} Co _{0.1} O ₃	-19	3.2	4.2
Ho _{0.9} Na _{0.1} Ni _{0.9} Cu _{0.1} O ₃	-20	3.1	4.0
Ho _{0.9} Na _{0.1} Ni _{0.9} Mo _{0.1} O ₃	-26	3.0	4.7
Ho _{0.9} Na _{0.1} Ni _{0.9} W _{0.1} O ₃	-23	2.4	4.6
Ho _{0.9} Na _{0.1} Ni _{0.9} Nb _{0.1} O ₃	-22	2.8	4.5
Ho _{0.9} Na _{0.1} Ni _{0.9} Ta _{0.1} O ₃	-19	2.9	4.2
Ho _{0.9} K _{0.1} Ni _{0.9} Ti _{0.1} O ₃	-20	2.8	4.8
Ho _{0.9} K _{0.1} Ni _{0.9} V _{0.1} O ₃	-22	3.5	4.1
Ho _{0.9} K _{0.1} Ni _{0.9} Cr _{0.1} O ₃	-20	4.0	3.8
Ho _{0.9} K _{0.1} Ni _{0.9} Mn _{0.1} O ₃	-21	3.9	4.0
Ho _{0.9} K _{0.1} Ni _{0.9} Fe _{0.1} O ₃	-23	2.1	4.6
Ho _{0.9} K _{0.1} Ni _{0.9} Co _{0.1} O ₃	-18	2.6	4.2
Ho _{0.9} K _{0.1} Ni _{0.9} Cu _{0.1} O ₃	-28	2.8	4.5

[0256] [表94]

$\text{Ho}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-19	2.7	4.3
$\text{Ho}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-24	3.9	4.1
$\text{Ho}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-25	3.8	3.9
$\text{Ho}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-16	2.7	4.0
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-22	2.8	3.7
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-24	3.7	4.0
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-23	3.4	3.9
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-26	2.8	3.6
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-28	3.0	4.1
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-19	2.9	3.9
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-21	2.2	4.6
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-22	1.9	4.3
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-24	1.8	4.0
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-21	2.9	4.7
$\text{Ho}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-29	3.1	4.2
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-18	2.1	4.9
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-24	3.0	3.9
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	2.8	4.2
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-21	3.2	4.0
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-27	3.1	4.7
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-25	3.0	4.6
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-30	2.4	4.5
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-28	2.8	4.2
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-27	2.9	4.7
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-25	3.0	4.8
$\text{Ho}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-18	2.8	4.1
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-22	3.5	3.8
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-10	4.0	4.0
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-26	3.9	4.6
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-20	2.1	4.2
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-19	2.6	4.5
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-17	2.8	4.3
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-23	2.7	4.2
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-22	3.9	4.1
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-18	3.8	3.9
$\text{Ho}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-20	2.7	4.0

[0257] [表95]

Ho _{0.9} Bi _{0.1} Ni _{0.9} Ta _{0.1} O ₃	-21	1.9	3.8
Er _{0.9} Na _{0.1} Ni _{0.9} Ti _{0.1} O ₃	-22	3.7	4.0
Er _{0.9} Na _{0.1} Ni _{0.9} V _{0.1} O ₃	-18	3.4	3.9
Er _{0.9} Na _{0.1} Ni _{0.9} Cr _{0.1} O ₃	-25	2.8	3.6
Er _{0.9} Na _{0.1} Ni _{0.9} Mn _{0.1} O ₃	-24	3.0	4.1
Er _{0.9} Na _{0.1} Ni _{0.9} Fe _{0.1} O ₃	-28	2.9	3.9
Er _{0.9} Na _{0.1} Ni _{0.9} Co _{0.1} O ₃	-19	1.8	4.6
Er _{0.9} Na _{0.1} Ni _{0.9} Cu _{0.1} O ₃	-20	2.9	4.3
Er _{0.9} Na _{0.1} Ni _{0.9} Mo _{0.1} O ₃	-26	3.1	4.0
Er _{0.9} Na _{0.1} Ni _{0.9} W _{0.1} O ₃	-23	2.2	4.7
Er _{0.9} Na _{0.1} Ni _{0.9} Nb _{0.1} O ₃	-22	2.1	4.2
Er _{0.9} Na _{0.1} Ni _{0.9} Ta _{0.1} O ₃	-19	3.0	4.3
Er _{0.9} K _{0.1} Ni _{0.9} Ti _{0.1} O ₃	-20	3.2	3.9
Er _{0.9} K _{0.1} Ni _{0.9} V _{0.1} O ₃	-22	3.1	4.2
Er _{0.9} K _{0.1} Ni _{0.9} Cr _{0.1} O ₃	-20	3.0	4.0
Er _{0.9} K _{0.1} Ni _{0.9} Mn _{0.1} O ₃	-21	2.4	4.7
Er _{0.9} K _{0.1} Ni _{0.9} Fe _{0.1} O ₃	-23	2.8	4.6
Er _{0.9} K _{0.1} Ni _{0.9} Co _{0.1} O ₃	-18	2.9	4.5
Er _{0.9} K _{0.1} Ni _{0.9} Cu _{0.1} O ₃	-28	3.0	4.2
Er _{0.9} K _{0.1} Ni _{0.9} Mo _{0.1} O ₃	-19	2.8	4.7
Er _{0.9} K _{0.1} Ni _{0.9} W _{0.1} O ₃	-24	3.5	4.8
Er _{0.9} K _{0.1} Ni _{0.9} Nb _{0.1} O ₃	-25	4.0	4.1
Er _{0.9} K _{0.1} Ni _{0.9} Ta _{0.1} O ₃	-16	3.9	3.8
Er _{0.9} Sr _{0.1} Ni _{0.9} Ti _{0.1} O ₃	-22	2.6	4.7
Er _{0.9} Sr _{0.1} Ni _{0.9} V _{0.1} O ₃	-24	2.2	4.6
Er _{0.9} Sr _{0.1} Ni _{0.9} Cr _{0.1} O ₃	-23	1.9	4.5
Er _{0.9} Sr _{0.1} Ni _{0.9} Mn _{0.1} O ₃	-26	1.8	4.2
Er _{0.9} Sr _{0.1} Ni _{0.9} Fe _{0.1} O ₃	-28	2.9	4.7
Er _{0.9} Sr _{0.1} Ni _{0.9} Co _{0.1} O ₃	-19	3.1	4.8
Er _{0.9} Sr _{0.1} Ni _{0.9} Cu _{0.1} O ₃	-21	2.2	4.1
Er _{0.9} Sr _{0.1} Ni _{0.9} Mo _{0.1} O ₃	-22	2.1	3.8
Er _{0.9} Sr _{0.1} Ni _{0.9} W _{0.1} O ₃	-24	3.0	4.1
Er _{0.9} Sr _{0.1} Ni _{0.9} Nb _{0.1} O ₃	-21	2.8	3.9
Er _{0.9} Sr _{0.1} Ni _{0.9} Ta _{0.1} O ₃	-29	3.2	4.6
Er _{0.9} Ca _{0.1} Ni _{0.9} Ti _{0.1} O ₃	-18	3.0	4.0
Er _{0.9} Ca _{0.1} Ni _{0.9} V _{0.1} O ₃	-24	2.4	4.7
Er _{0.9} Ca _{0.1} Ni _{0.9} Cr _{0.1} O ₃	-22	2.8	4.2

[0258] [表96]

$\text{Er}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-21	2.9	4.3
$\text{Er}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-27	3.0	4.9
$\text{Er}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-21	2.8	3.9
$\text{Er}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-23	3.5	4.2
$\text{Er}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-19	4.0	4.0
$\text{Er}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-23	3.9	4.7
$\text{Er}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-24	2.1	4.6
$\text{Er}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-25	2.6	4.5
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-16	2.8	4.2
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-20	2.7	4.7
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-22	3.9	4.8
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	3.8	4.1
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-10	2.7	3.8
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-26	1.9	4.0
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-20	2.8	4.6
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-19	3.7	4.2
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-17	3.4	4.5
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-23	2.8	4.3
$\text{Er}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-22	3.0	4.1
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-20	1.8	4.0
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-21	2.9	3.8
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-21	3.1	3.7
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	2.2	4.0
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-18	2.1	3.9
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-25	3.0	3.6
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-24	2.8	4.1
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-28	3.2	3.9
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	3.1	4.6
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-20	3.0	4.3
$\text{Yb}_{0.9}\text{Na}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-26	2.4	4.0
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-22	2.9	4.2
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-19	3.0	4.3
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-17	2.8	4.9
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-20	3.5	3.9
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-22	4.0	4.2
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-20	3.9	4.0
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-21	2.1	4.7

[0259] [表97]

$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-23	2.6	4.6
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-18	2.8	4.5
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-28	2.7	4.2
$\text{Yb}_{0.9}\text{K}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-19	3.1	4.7
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-25	2.1	4.1
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-16	3.0	3.8
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-20	2.8	4.0
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-22	3.2	4.6
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-24	3.1	4.2
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-23	3.0	4.5
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-26	2.4	4.3
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-28	2.8	4.2
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	2.9	4.1
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-21	3.0	3.9
$\text{Yb}_{0.9}\text{Sr}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-22	2.8	4.0
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-21	4.0	3.7
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-29	3.9	4.0
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-17	2.1	3.9
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-18	2.6	3.6
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-24	2.8	4.1
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-22	2.7	3.9
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-21	3.9	4.6
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-27	3.8	4.3
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-21	2.7	4.0
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-23	1.9	4.7
$\text{Yb}_{0.9}\text{Ca}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-19	2.8	4.2
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_3$	-23	3.7	4.3
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_3$	-24	3.4	4.9
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_3$	-25	2.8	3.9
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_3$	-16	3.0	4.2
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_3$	-20	2.9	4.0
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_3$	-22	1.8	4.7
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_3$	-29	2.9	4.6
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_3$	-22	3.1	4.5
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_3$	-19	2.2	4.2
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_3$	-25	2.1	4.7
$\text{Yb}_{0.9}\text{Bi}_{0.1}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_3$	-30	3.0	4.8

[0260] [表98]

組成 (Ln_sR^3_t) ₂ Ni _v R ⁴ _v O _w	ゼーベック係数 $\mu\text{V/K}$ (700°C)	電気抵抗率 $\text{m}\Omega\text{cm}$ (700°C)	熱伝導度 W/mK (700°C)
La ₂ NiO ₄	-25	6.1	4.3
Ce ₂ NiO ₄	-28	5.0	4.2
Pr ₂ NiO ₄	-28	7.0	4.3
Nd ₂ NiO ₄	-22	4.9	4.5
Sm ₂ NiO ₄	-20	5.0	4.6
Eu ₂ NiO ₄	-25	6.0	4.7
Gd ₂ NiO ₄	-27	5.2	4.4
Dy ₂ NiO ₄	-30	7.0	4.9
Ho ₂ NiO ₄	-29	8.1	4.7
Er ₂ NiO ₄	-30	6.9	4.6
Yb ₂ NiO ₄	-28	6.7	4.6
La _{1.8} Na _{0.2} NiO ₄	-25	6.9	4.2
La _{1.8} K _{0.2} NiO ₄	-18	5.9	4.7
La _{1.8} Sr _{0.2} NiO ₄	-22	6.3	4.8
La _{1.8} Ca _{0.2} NiO ₄	-10	7.0	4.1
La _{1.8} Bi _{0.2} NiO ₄	-26	7.1	3.8
Ce _{1.8} Na _{0.2} NiO ₄	-19	7.0	4.6
Ce _{1.8} K _{0.2} NiO ₄	-17	6.8	4.2
Ce _{1.8} Sr _{0.2} NiO ₄	-23	6.9	4.5
Ce _{1.8} Ca _{0.2} NiO ₄	-22	6.7	4.3
Ce _{1.8} Bi _{0.2} NiO ₄	-18	7.1	4.1
Pr _{1.8} Na _{0.2} NiO ₄	-21	6.3	4.0
Pr _{1.8} K _{0.2} NiO ₄	-21	7.1	3.8
Pr _{1.8} Sr _{0.2} NiO ₄	-22	6.4	3.7
Pr _{1.8} Ca _{0.2} NiO ₄	-18	5.9	4.0
Pr _{1.8} Bi _{0.2} NiO ₄	-25	6.4	3.9
Nd _{1.8} Na _{0.2} NiO ₄	-28	7.0	4.1
Nd _{1.8} K _{0.2} NiO ₄	-19	6.8	3.9
Nd _{1.8} Sr _{0.2} NiO ₄	-20	7.1	4.6
Nd _{1.8} Ca _{0.2} NiO ₄	-26	6.8	4.3
Nd _{1.8} Bi _{0.2} NiO ₄	-23	5.9	4.0

[0261] [表99]

$\text{Sm}_{1.8}\text{Na}_{0.2}\text{NiO}_4$	-19	7.0	4.2
$\text{Sm}_{1.8}\text{K}_{0.2}\text{NiO}_4$	-17	6.8	4.3
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{NiO}_4$	-20	5.0	4.9
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{NiO}_4$	-22	7.0	3.9
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{NiO}_4$	-20	4.9	4.2
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{NiO}_4$	-23	6.0	4.7
$\text{Eu}_{1.8}\text{K}_{0.2}\text{NiO}_4$	-18	5.2	4.6
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{NiO}_4$	-28	7.0	4.5
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{NiO}_4$	-19	8.1	4.2
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{NiO}_4$	-24	6.9	4.7
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{NiO}_4$	-16	7.2	4.1
$\text{Gd}_{1.8}\text{K}_{0.2}\text{NiO}_4$	-20	6.9	3.8
$\text{Gd}_{1.8}\text{Sr}_{0.2}\text{NiO}_4$	-22	5.9	4.0
$\text{Gd}_{1.8}\text{Ca}_{0.2}\text{NiO}_4$	-24	6.3	4.6
$\text{Gd}_{1.8}\text{Bi}_{0.2}\text{NiO}_4$	-23	7.0	4.2
$\text{Dy}_{1.8}\text{Na}_{0.2}\text{NiO}_4$	-28	7.3	4.3
$\text{Dy}_{1.8}\text{K}_{0.2}\text{NiO}_4$	-19	7.0	4.2
$\text{Dy}_{1.8}\text{Sr}_{0.2}\text{NiO}_4$	-21	6.8	4.1
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{NiO}_4$	-22	6.9	3.9
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{NiO}_4$	-24	6.7	4.0
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{NiO}_4$	-29	5.8	3.7
$\text{Ho}_{1.8}\text{K}_{0.2}\text{NiO}_4$	-17	6.3	4.0
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{NiO}_4$	-18	7.1	3.9
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{NiO}_4$	-24	6.4	3.6
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{NiO}_4$	-22	5.9	4.1
$\text{Er}_{1.8}\text{Na}_{0.2}\text{NiO}_4$	-27	7.1	4.6
$\text{Er}_{1.8}\text{K}_{0.2}\text{NiO}_4$	-25	7.0	4.3
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{NiO}_4$	-30	6.8	4.0
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{NiO}_4$	-28	7.1	4.7
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{NiO}_4$	-24	6.8	4.2
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{NiO}_4$	-25	5.9	4.3

[0262] [表100]

$\text{Yb}_{1.8}\text{K}_{0.2}\text{NiO}_4$	-16	6.5	4.9
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{NiO}_4$	-20	7.0	3.9
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{NiO}_4$	-22	6.8	4.2
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{NiO}_4$	-24	5.8	4.0
$\text{La}_2\text{Ni}_{1.8}\text{Ti}_{0.2}\text{O}_4$	-26	7.1	4.6
$\text{La}_2\text{Ni}_{1.8}\text{V}_{0.2}\text{O}_4$	-28	6.4	4.5
$\text{La}_2\text{Ni}_{1.8}\text{Cr}_{0.2}\text{O}_4$	-19	5.9	4.2
$\text{La}_2\text{Ni}_{1.8}\text{Mn}_{0.2}\text{O}_4$	-21	6.4	4.7
$\text{La}_2\text{Ni}_{1.8}\text{Fe}_{0.2}\text{O}_4$	-22	7.1	4.8
$\text{La}_2\text{Ni}_{1.8}\text{Co}_{0.2}\text{O}_4$	-24	7.0	4.1
$\text{La}_2\text{Ni}_{1.8}\text{Cu}_{0.2}\text{O}_4$	-21	6.8	3.8
$\text{La}_2\text{Ni}_{1.8}\text{Mo}_{0.2}\text{O}_4$	-29	7.1	4.0
$\text{La}_2\text{Ni}_{1.8}\text{W}_{0.2}\text{O}_4$	-17	6.8	4.7
$\text{La}_2\text{Ni}_{1.8}\text{Nb}_{0.2}\text{O}_4$	-18	5.9	4.6
$\text{La}_2\text{Ni}_{1.8}\text{Ta}_{0.2}\text{O}_4$	-24	6.5	4.5
$\text{Ce}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-21	5.0	4.7
$\text{Ce}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-27	7.0	4.8
$\text{Ce}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-25	4.9	4.1
$\text{Ce}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-30	5.0	3.8
$\text{Ce}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-28	6.0	4.1
$\text{Ce}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-27	5.2	3.9
$\text{Ce}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-25	7.0	4.6
$\text{Ce}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-18	8.1	4.3
$\text{Ce}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-22	6.9	4.0
$\text{Ce}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-10	6.7	4.7
$\text{Ce}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-26	7.2	4.2
$\text{Pr}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-19	5.9	4.9
$\text{Pr}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-17	6.3	3.9
$\text{Pr}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-23	7.0	4.2
$\text{Pr}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-22	7.1	4.0
$\text{Pr}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-18	7.3	4.7
$\text{Pr}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-20	7.0	4.6
$\text{Pr}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-21	6.8	4.5
$\text{Pr}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	6.9	4.2

[0263] [表101]

$\text{Pr}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-22	6.7	4.7
$\text{Pr}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-18	7.1	4.8
$\text{Pr}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-25	5.8	4.1
$\text{Nd}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-28	7.1	4.0
$\text{Nd}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-19	6.4	4.6
$\text{Nd}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-20	5.9	4.2
$\text{Nd}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-26	6.4	4.5
$\text{Nd}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-23	7.1	4.3
$\text{Nd}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	7.0	4.1
$\text{Nd}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-19	6.8	3.9
$\text{Nd}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-17	7.1	4.0
$\text{Nd}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-20	6.8	3.8
$\text{Nd}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-22	5.9	3.7
$\text{Nd}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-20	6.5	4.0
$\text{Sm}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-23	6.8	3.6
$\text{Sm}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-18	5.0	4.1
$\text{Sm}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-28	7.0	3.9
$\text{Sm}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-19	4.9	4.6
$\text{Sm}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-24	5.0	4.3
$\text{Sm}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-25	6.0	4.0
$\text{Sm}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-16	5.2	4.7
$\text{Sm}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-20	7.0	4.2
$\text{Sm}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-22	8.1	4.3
$\text{Sm}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-24	6.9	4.9
$\text{Sm}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-23	6.7	3.9
$\text{Eu}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-26	7.2	4.2
$\text{Eu}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-28	6.9	4.0
$\text{Eu}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-19	5.9	4.7
$\text{Eu}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-21	6.3	4.6
$\text{Eu}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	7.0	4.5
$\text{Eu}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	7.1	4.2
$\text{Eu}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-21	7.3	4.7
$\text{Eu}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-29	7.0	4.8
$\text{Eu}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-17	6.8	4.1
$\text{Eu}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-18	6.9	3.8

[0264] [表102]

$\text{Eu}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-24	6.7	4.0
$\text{Gd}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-21	5.8	4.2
$\text{Gd}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-27	6.3	4.3
$\text{Gd}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-21	7.1	4.5
$\text{Gd}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-23	6.4	4.6
$\text{Gd}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-19	5.9	4.7
$\text{Gd}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-23	6.4	4.4
$\text{Gd}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	7.1	4.9
$\text{Gd}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-25	7.0	4.7
$\text{Gd}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-16	6.8	4.6
$\text{Gd}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-20	7.1	4.6
$\text{Gd}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-22	6.8	4.5
$\text{Dy}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-10	6.5	4.7
$\text{Dy}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-26	7.0	4.8
$\text{Dy}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-20	6.8	4.1
$\text{Dy}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-19	5.8	3.8
$\text{Dy}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-17	6.3	4.0
$\text{Dy}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-23	7.1	4.6
$\text{Dy}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	6.4	4.2
$\text{Dy}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-18	5.9	4.5
$\text{Dy}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-20	6.4	4.3
$\text{Dy}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-21	7.1	4.1
$\text{Dy}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-21	7.0	3.9
$\text{Ho}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-18	7.1	3.8
$\text{Ho}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-25	6.8	3.7
$\text{Ho}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-24	5.9	4.0
$\text{Ho}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-28	5.0	3.9
$\text{Ho}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-19	7.0	3.6
$\text{Ho}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-20	4.9	4.1
$\text{Ho}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-26	5.0	3.9
$\text{Ho}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-23	6.0	4.6
$\text{Ho}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-22	5.2	4.3
$\text{Ho}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-19	7.0	4.0
$\text{Ho}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-17	8.1	4.7

[0265] [表103]

$\text{Er}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	6.7	4.3
$\text{Er}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-20	7.2	4.9
$\text{Er}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-21	6.9	3.9
$\text{Er}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-23	5.9	4.2
$\text{Er}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-18	6.3	4.0
$\text{Er}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-28	7.0	4.7
$\text{Er}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-19	7.1	4.6
$\text{Er}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-24	7.3	4.5
$\text{Er}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-25	7.0	4.2
$\text{Er}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-16	6.8	4.7
$\text{Er}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-20	6.9	4.8
$\text{Yb}_2\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	7.1	3.8
$\text{Yb}_2\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-23	5.8	4.0
$\text{Yb}_2\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-26	6.3	4.6
$\text{Yb}_2\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-28	7.1	4.2
$\text{Yb}_2\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-19	6.4	4.5
$\text{Yb}_2\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-21	5.9	4.3
$\text{Yb}_2\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	6.4	4.2
$\text{Yb}_2\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-24	7.1	4.1
$\text{Yb}_2\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-21	7.0	3.9
$\text{Yb}_2\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-29	6.8	4.0
$\text{Yb}_2\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-17	7.1	3.8
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	5.9	4.0
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-22	6.5	3.9
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-21	7.0	3.6
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-30	6.8	4.1
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-29	5.0	3.9
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-30	7.0	4.6
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-28	4.9	4.3
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-27	5.0	4.0
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-25	6.0	4.7
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-18	5.2	4.4
$\text{La}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-22	7.0	4.9

[0266] [表104]

$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-26	6.9	4.6
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-20	6.7	4.6
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-19	7.2	4.5
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-17	6.9	4.2
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-23	5.9	4.7
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	6.3	4.8
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-18	7.0	4.1
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-20	7.1	3.8
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-21	7.3	4.0
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-21	7.0	4.6
$\text{La}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-22	6.8	4.2
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-25	6.7	4.3
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-24	7.1	4.1
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-28	5.8	3.9
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-19	6.3	4.0
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-20	7.1	3.8
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-26	6.4	3.7
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-23	5.9	4.0
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-22	6.4	3.9
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-19	7.1	3.6
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-17	7.0	4.1
$\text{La}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-20	6.8	3.9
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-20	6.8	4.3
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	5.9	4.0
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-23	6.5	4.7
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-18	7.0	4.2
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-28	6.8	4.3
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-19	5.8	4.9
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	6.3	3.9
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-25	7.1	4.2
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-16	6.4	4.0
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-20	5.9	4.7
$\text{La}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-22	6.4	4.6
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-23	7.0	4.2

[0267] [表105]

$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-26	6.8	4.7
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-28	7.1	4.8
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-19	6.8	4.1
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-21	5.9	3.8
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	6.5	4.0
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	7.0	4.6
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	5.0	4.2
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-29	7.0	4.5
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-17	4.9	4.3
$\text{La}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-18	5.0	4.2
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	5.2	3.9
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	7.0	4.0
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-27	8.1	3.8
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-25	6.9	3.7
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-30	6.7	4.0
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-28	7.2	3.9
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	6.9	3.6
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-25	5.9	4.1
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-16	6.3	3.9
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-20	7.0	4.6
$\text{Ce}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-22	7.1	4.3
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-23	7.0	4.0
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-26	6.8	4.7
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-28	5.2	4.2
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-19	7.0	4.3
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-21	8.1	4.9
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	6.9	3.9
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	6.7	4.2
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	7.2	4.0
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-29	6.9	4.7
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-17	5.9	4.6
$\text{Ce}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-18	6.3	4.5
$\text{Ce}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	7.1	4.7
$\text{Ce}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	7.3	4.8

[0268] [表106]

$Ce_{1.8}Sr_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-27	7.0	4.1
$Ce_{1.8}Sr_{0.2}Ni_{0.9}Mn_{0.1}O_4$	-25	6.8	3.8
$Ce_{1.8}Sr_{0.2}Ni_{0.9}Fe_{0.1}O_4$	-30	6.9	4.0
$Ce_{1.8}Sr_{0.2}Ni_{0.9}Co_{0.1}O_4$	-28	6.7	4.6
$Ce_{1.8}Sr_{0.2}Ni_{0.9}Cu_{0.1}O_4$	-27	7.1	4.2
$Ce_{1.8}Sr_{0.2}Ni_{0.9}Mo_{0.1}O_4$	-25	5.8	4.5
$Ce_{1.8}Sr_{0.2}Ni_{0.9}W_{0.1}O_4$	-18	6.3	4.3
$Ce_{1.8}Sr_{0.2}Ni_{0.9}Nb_{0.1}O_4$	-22	7.1	4.2
$Ce_{1.8}Sr_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-10	6.4	4.1
$Ce_{1.8}Ca_{0.2}Ni_{0.9}Ti_{0.1}O_4$	-23	6.4	4.0
$Ce_{1.8}Ca_{0.2}Ni_{0.9}V_{0.1}O_4$	-22	7.1	3.8
$Ce_{1.8}Ca_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-19	7.0	3.7
$Ce_{1.8}Ca_{0.2}Ni_{0.9}Mn_{0.1}O_4$	-17	6.8	4.0
$Ce_{1.8}Ca_{0.2}Ni_{0.9}Fe_{0.1}O_4$	-20	7.1	3.9
$Ce_{1.8}Ca_{0.2}Ni_{0.9}Co_{0.1}O_4$	-22	6.8	3.6
$Ce_{1.8}Ca_{0.2}Ni_{0.9}Cu_{0.1}O_4$	-20	5.9	4.1
$Ce_{1.8}Ca_{0.2}Ni_{0.9}Mo_{0.1}O_4$	-21	6.5	3.9
$Ce_{1.8}Ca_{0.2}Ni_{0.9}W_{0.1}O_4$	-23	7.0	4.6
$Ce_{1.8}Ca_{0.2}Ni_{0.9}Nb_{0.1}O_4$	-18	6.8	4.3
$Ce_{1.8}Ca_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-28	5.0	4.0
$Ce_{1.8}Bi_{0.2}Ni_{0.9}Ti_{0.1}O_4$	-24	4.9	4.2
$Ce_{1.8}Bi_{0.2}Ni_{0.9}V_{0.1}O_4$	-25	5.0	4.3
$Ce_{1.8}Bi_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-16	6.0	4.9
$Ce_{1.8}Bi_{0.2}Ni_{0.9}Mn_{0.1}O_4$	-20	5.2	3.9
$Ce_{1.8}Bi_{0.2}Ni_{0.9}Fe_{0.1}O_4$	-22	7.0	4.2
$Ce_{1.8}Bi_{0.2}Ni_{0.9}Co_{0.1}O_4$	-24	8.1	4.0
$Ce_{1.8}Bi_{0.2}Ni_{0.9}Cu_{0.1}O_4$	-23	6.9	4.7
$Ce_{1.8}Bi_{0.2}Ni_{0.9}Mo_{0.1}O_4$	-26	6.7	4.6
$Ce_{1.8}Bi_{0.2}Ni_{0.9}W_{0.1}O_4$	-28	7.2	4.5
$Ce_{1.8}Bi_{0.2}Ni_{0.9}Nb_{0.1}O_4$	-19	6.9	4.2
$Ce_{1.8}Bi_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-21	5.9	4.7
$Pr_{1.8}Na_{0.2}Ni_{0.9}Ti_{0.1}O_4$	-24	7.0	4.1
$Pr_{1.8}Na_{0.2}Ni_{0.9}V_{0.1}O_4$	-21	7.1	3.8
$Pr_{1.8}Na_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-29	7.3	4.0

[0269] [表107]

$\text{Pr}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-17	7.0	4.7
$\text{Pr}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-18	6.8	4.6
$\text{Pr}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	6.9	4.5
$\text{Pr}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	6.7	4.2
$\text{Pr}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	7.1	4.7
$\text{Pr}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-27	5.8	4.8
$\text{Pr}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-25	6.3	4.1
$\text{Pr}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-30	7.1	3.8
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	5.9	3.9
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-25	6.4	4.6
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-16	7.1	4.3
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-20	7.0	4.0
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	6.8	4.7
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	7.1	4.2
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-23	6.8	4.3
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-26	5.9	4.9
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-28	6.5	3.9
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-19	7.0	4.2
$\text{Pr}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-21	6.8	4.0
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	6.3	4.6
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	7.1	4.5
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-29	6.4	4.2
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-17	5.9	4.7
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-18	6.4	4.8
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	7.1	4.1
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	7.0	3.8
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	6.8	4.0
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-27	7.1	4.6
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-25	6.8	4.2
$\text{Pr}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-30	5.9	4.5
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-27	7.0	4.1
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-25	4.9	3.9
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-18	5.0	4.0
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-22	6.0	3.8

[0270] [表108]

$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-10	5.2	3.7
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-26	7.0	4.0
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-20	8.1	3.9
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-19	6.9	3.6
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-17	6.7	4.1
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-23	7.2	3.9
$\text{Pr}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-22	6.9	4.6
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-20	6.3	4.0
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	7.0	4.7
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-21	7.1	4.2
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-22	7.3	4.3
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-18	7.0	4.9
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-25	6.8	3.9
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	6.9	4.2
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-28	6.7	4.0
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-19	7.1	4.7
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-20	5.8	4.6
$\text{Pr}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-26	6.3	4.5
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	6.4	4.7
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-19	5.9	4.8
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-17	6.4	4.1
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-20	7.1	3.8
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	7.0	4.0
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-20	6.8	4.3
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-21	7.1	4.2
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-23	6.8	4.3
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-18	5.9	4.5
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-28	6.5	4.6
$\text{Nd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-19	7.0	4.7
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-25	5.0	4.9
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-16	7.0	4.7
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-20	4.9	4.6
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-22	5.0	4.6
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-24	6.0	4.5

[0271] [表109]

$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-23	5.2	4.2
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-26	7.0	4.7
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-28	8.1	4.8
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-19	6.9	4.1
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-21	6.7	3.8
$\text{Nd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-22	7.2	4.0
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-21	5.9	4.2
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-29	6.3	4.5
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-17	7.0	4.3
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-18	7.1	4.1
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-24	7.3	3.9
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	7.0	4.0
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-21	6.8	3.8
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-27	6.9	3.7
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-21	6.7	4.0
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-23	7.1	3.9
$\text{Nd}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-19	5.8	3.6
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	7.1	3.9
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-25	6.4	4.6
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-16	5.9	4.3
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-20	6.4	4.0
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	7.1	4.7
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	7.0	4.2
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-10	6.8	4.3
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-26	7.1	4.9
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-20	6.8	3.9
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-19	5.9	4.2
$\text{Nd}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-17	6.5	4.0
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	6.8	4.6
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-18	5.8	4.5
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-20	6.3	4.2
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-21	7.1	4.7
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-21	6.4	4.8
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	5.9	4.1

[0272] [表110]

$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-18	6.4	3.8
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-25	7.1	4.0
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-24	7.0	4.6
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-28	6.8	4.2
$\text{Nd}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-19	7.1	4.5
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-26	5.9	4.2
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-23	6.5	4.1
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-22	7.0	3.9
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-19	5.0	4.0
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-17	7.0	3.8
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-20	4.9	3.7
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	5.0	4.0
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-20	6.0	3.9
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-21	5.2	3.6
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-23	7.0	4.1
$\text{Sm}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-18	8.1	3.9
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-19	6.7	4.3
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-24	7.2	4.0
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-25	6.9	4.7
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-16	5.9	4.4
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-20	6.3	4.9
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	7.0	4.7
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	7.1	4.6
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-23	7.3	4.6
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-26	7.0	4.5
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-28	7.1	4.2
$\text{Sm}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-19	6.4	4.7
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	6.4	4.1
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-24	7.1	3.8
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-21	7.0	4.0
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-29	6.8	4.6
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-17	7.1	4.2
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-18	6.8	4.5
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	5.9	4.3

[0273] [表111]

$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-22	5.0	4.1
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-21	7.0	3.9
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-30	4.9	4.0
$\text{Sm}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-20	5.0	3.8
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-20	5.2	4.0
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	7.0	3.9
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-23	8.1	3.6
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-18	6.9	3.8
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-28	6.7	3.7
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-19	7.2	4.0
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	6.9	3.9
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-25	5.9	3.6
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-16	6.3	4.1
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-20	7.0	3.9
$\text{Sm}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-22	7.1	4.6
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-23	7.0	4.0
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-26	6.8	4.7
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-28	6.9	4.2
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-19	6.7	4.3
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-21	7.1	4.9
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	5.8	3.9
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	6.3	4.2
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	7.1	4.0
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-29	6.4	4.7
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-17	5.9	4.6
$\text{Sm}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-18	6.4	4.5
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	7.0	4.7
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	6.8	4.8
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-30	7.1	4.1
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-29	6.8	3.8
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-30	5.9	4.0
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-28	6.5	4.3
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-27	7.0	4.2
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-25	6.8	4.3

[0274] [表112]

$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-18	5.0	4.5
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-22	7.0	4.6
$\text{Eu}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-10	4.9	4.7
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-20	6.0	4.9
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-19	5.2	4.7
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-17	7.0	4.6
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-23	8.1	4.6
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	6.9	4.5
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-18	6.7	4.2
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-20	7.2	4.7
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	6.9	4.8
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-21	5.9	4.1
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-22	6.3	3.8
$\text{Eu}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-18	7.0	4.0
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	7.3	4.2
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-28	7.0	4.5
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-19	6.8	4.3
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-20	6.9	4.1
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-26	6.7	3.9
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-23	7.1	4.0
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	5.8	3.8
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-19	6.3	3.7
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-17	7.1	4.0
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-20	6.4	3.9
$\text{Eu}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-22	5.9	3.6
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-21	7.1	3.9
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-23	7.0	4.6
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-18	6.8	4.3
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-28	7.1	4.0
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-19	6.8	4.7
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	5.9	4.2
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-25	6.5	4.3
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-16	7.0	4.9
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-20	6.8	3.9

[0275] [表113]

$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-22	5.8	4.2
$\text{Eu}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-24	6.3	4.0
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-26	6.4	4.6
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-28	5.9	4.5
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-19	6.4	4.2
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-21	7.1	4.7
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	7.0	4.8
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	6.8	4.1
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-21	7.1	3.8
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-29	6.8	4.0
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-17	5.9	4.6
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-18	6.5	4.2
$\text{Eu}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-24	7.0	4.5
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-21	7.0	4.2
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-27	4.9	4.1
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-25	5.0	3.9
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-30	6.0	4.0
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-28	5.2	3.8
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	7.0	3.7
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-25	8.1	4.0
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-16	6.9	3.9
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-20	6.7	3.6
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-22	7.2	4.1
$\text{Gd}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-24	6.9	3.9
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-26	6.3	4.3
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-28	7.0	4.0
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-19	7.1	4.7
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-21	7.3	4.4
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	7.0	4.9
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	6.8	4.7
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-21	5.2	4.6
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-29	7.0	4.6
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-17	8.1	4.5
$\text{Gd}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-18	6.9	4.2

[0276] [表114]

$Gd_{1.8}K_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-24	6.7	4.7
$Gd_{1.8}Sr_{0.2}Ni_{0.9}Ti_{0.1}O_4$	-21	6.9	4.1
$Gd_{1.8}Sr_{0.2}Ni_{0.9}V_{0.1}O_4$	-27	5.9	3.8
$Gd_{1.8}Sr_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-25	6.3	4.0
$Gd_{1.8}Sr_{0.2}Ni_{0.9}Mn_{0.1}O_4$	-30	7.0	4.6
$Gd_{1.8}Sr_{0.2}Ni_{0.9}Fe_{0.1}O_4$	-28	7.1	4.2
$Gd_{1.8}Sr_{0.2}Ni_{0.9}Co_{0.1}O_4$	-27	7.3	4.5
$Gd_{1.8}Sr_{0.2}Ni_{0.9}Cu_{0.1}O_4$	-25	7.0	4.3
$Gd_{1.8}Sr_{0.2}Ni_{0.9}Mo_{0.1}O_4$	-18	6.8	4.1
$Gd_{1.8}Sr_{0.2}Ni_{0.9}W_{0.1}O_4$	-22	6.9	3.9
$Gd_{1.8}Sr_{0.2}Ni_{0.9}Nb_{0.1}O_4$	-10	6.7	4.0
$Gd_{1.8}Sr_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-26	7.1	3.8
$Gd_{1.8}Ca_{0.2}Ni_{0.9}Ti_{0.1}O_4$	-24	7.1	4.0
$Gd_{1.8}Ca_{0.2}Ni_{0.9}V_{0.1}O_4$	-22	6.8	3.9
$Gd_{1.8}Ca_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-21	5.9	4.1
$Gd_{1.8}Ca_{0.2}Ni_{0.9}Mn_{0.1}O_4$	-27	6.5	3.8
$Gd_{1.8}Ca_{0.2}Ni_{0.9}Fe_{0.1}O_4$	-25	7.0	4.0
$Gd_{1.8}Ca_{0.2}Ni_{0.9}Co_{0.1}O_4$	-30	6.8	4.6
$Gd_{1.8}Ca_{0.2}Ni_{0.9}Cu_{0.1}O_4$	-28	5.0	4.2
$Gd_{1.8}Ca_{0.2}Ni_{0.9}Mo_{0.1}O_4$	-27	7.0	4.5
$Gd_{1.8}Ca_{0.2}Ni_{0.9}W_{0.1}O_4$	-25	4.9	4.3
$Gd_{1.8}Ca_{0.2}Ni_{0.9}Nb_{0.1}O_4$	-18	5.0	4.2
$Gd_{1.8}Ca_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-22	6.0	4.1
$Gd_{1.8}Bi_{0.2}Ni_{0.9}Ti_{0.1}O_4$	-26	7.0	4.0
$Gd_{1.8}Bi_{0.2}Ni_{0.9}V_{0.1}O_4$	-20	8.1	3.8
$Gd_{1.8}Bi_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-19	6.9	3.7
$Gd_{1.8}Bi_{0.2}Ni_{0.9}Mn_{0.1}O_4$	-17	6.7	4.0
$Gd_{1.8}Bi_{0.2}Ni_{0.9}Fe_{0.1}O_4$	-23	7.2	3.9
$Gd_{1.8}Bi_{0.2}Ni_{0.9}Co_{0.1}O_4$	-22	6.9	3.6
$Gd_{1.8}Bi_{0.2}Ni_{0.9}Cu_{0.1}O_4$	-18	5.9	4.1
$Gd_{1.8}Bi_{0.2}Ni_{0.9}Mo_{0.1}O_4$	-20	6.3	3.9
$Gd_{1.8}Bi_{0.2}Ni_{0.9}W_{0.1}O_4$	-21	7.0	4.6
$Gd_{1.8}Bi_{0.2}Ni_{0.9}Nb_{0.1}O_4$	-21	7.1	4.3
$Gd_{1.8}Bi_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-22	7.3	4.0

[0277] [表115]

$Dy_{1.8}Na_{0.2}Ni_{0.9}Ti_{0.1}O_4$	-25	6.8	4.4
$Dy_{1.8}Na_{0.2}Ni_{0.9}V_{0.1}O_4$	-24	6.9	4.9
$Dy_{1.8}Na_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-28	6.7	4.7
$Dy_{1.8}Na_{0.2}Ni_{0.9}Mn_{0.1}O_4$	-19	7.1	4.6
$Dy_{1.8}Na_{0.2}Ni_{0.9}Fe_{0.1}O_4$	-20	5.8	4.6
$Dy_{1.8}Na_{0.2}Ni_{0.9}Co_{0.1}O_4$	-26	6.3	4.5
$Dy_{1.8}Na_{0.2}Ni_{0.9}Cu_{0.1}O_4$	-23	7.1	4.2
$Dy_{1.8}Na_{0.2}Ni_{0.9}Mo_{0.1}O_4$	-22	6.4	4.7
$Dy_{1.8}Na_{0.2}Ni_{0.9}W_{0.1}O_4$	-19	5.9	4.8
$Dy_{1.8}Na_{0.2}Ni_{0.9}Nb_{0.1}O_4$	-17	6.4	4.1
$Dy_{1.8}Na_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-20	7.1	3.8
$Dy_{1.8}K_{0.2}Ni_{0.9}Ti_{0.1}O_4$	-20	6.8	4.6
$Dy_{1.8}K_{0.2}Ni_{0.9}V_{0.1}O_4$	-21	7.1	4.2
$Dy_{1.8}K_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-23	6.8	4.5
$Dy_{1.8}K_{0.2}Ni_{0.9}Mn_{0.1}O_4$	-18	5.9	4.3
$Dy_{1.8}K_{0.2}Ni_{0.9}Fe_{0.1}O_4$	-28	6.5	4.1
$Dy_{1.8}K_{0.2}Ni_{0.9}Co_{0.1}O_4$	-19	7.0	3.9
$Dy_{1.8}K_{0.2}Ni_{0.9}Cu_{0.1}O_4$	-24	6.8	4.0
$Dy_{1.8}K_{0.2}Ni_{0.9}Mo_{0.1}O_4$	-25	5.8	3.8
$Dy_{1.8}K_{0.2}Ni_{0.9}W_{0.1}O_4$	-16	6.3	3.7
$Dy_{1.8}K_{0.2}Ni_{0.9}Nb_{0.1}O_4$	-20	7.1	4.0
$Dy_{1.8}K_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-22	6.4	3.9
$Dy_{1.8}Sr_{0.2}Ni_{0.9}Ti_{0.1}O_4$	-23	6.4	3.8
$Dy_{1.8}Sr_{0.2}Ni_{0.9}V_{0.1}O_4$	-26	7.1	3.7
$Dy_{1.8}Sr_{0.2}Ni_{0.9}Cr_{0.1}O_4$	-28	7.0	4.0
$Dy_{1.8}Sr_{0.2}Ni_{0.9}Mn_{0.1}O_4$	-19	6.8	3.9
$Dy_{1.8}Sr_{0.2}Ni_{0.9}Fe_{0.1}O_4$	-21	7.1	3.6
$Dy_{1.8}Sr_{0.2}Ni_{0.9}Co_{0.1}O_4$	-22	6.8	4.1
$Dy_{1.8}Sr_{0.2}Ni_{0.9}Cu_{0.1}O_4$	-24	5.9	3.9
$Dy_{1.8}Sr_{0.2}Ni_{0.9}Mo_{0.1}O_4$	-21	6.5	4.6
$Dy_{1.8}Sr_{0.2}Ni_{0.9}W_{0.1}O_4$	-29	7.0	4.3
$Dy_{1.8}Sr_{0.2}Ni_{0.9}Nb_{0.1}O_4$	-17	5.0	4.0
$Dy_{1.8}Sr_{0.2}Ni_{0.9}Ta_{0.1}O_4$	-18	7.0	4.7

[0278] [表116]

$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	5.0	4.3
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	6.0	4.9
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-27	5.2	3.9
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-21	7.0	4.2
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-23	8.1	4.0
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-19	6.9	4.7
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-23	6.7	4.6
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-24	7.2	4.5
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-25	6.9	4.2
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-16	5.9	4.7
$\text{Dy}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-20	6.3	4.8
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	7.1	3.8
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-10	7.3	4.0
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-26	7.0	4.3
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-20	7.1	4.2
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-19	6.4	4.3
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-17	5.9	4.5
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-23	6.4	4.6
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-22	7.1	4.7
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-18	7.0	4.4
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-20	6.8	4.9
$\text{Dy}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-21	7.1	4.7
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	5.9	4.6
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-18	5.0	4.5
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-25	7.0	4.2
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-24	4.9	4.7
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-28	5.0	4.8
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-19	6.0	4.1
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-20	5.2	3.8
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-26	7.0	4.0
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-23	8.1	4.6
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-22	6.9	4.2
$\text{Ho}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-19	6.7	4.5
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-20	6.9	4.1

[0279] [表117]

$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-22	5.9	3.9
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-20	6.3	4.0
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-21	7.0	3.8
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-23	7.1	3.7
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-18	7.3	4.0
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-28	7.0	3.9
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-19	6.8	3.6
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-24	6.9	4.1
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-25	6.7	3.9
$\text{Ho}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-16	7.1	4.6
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	6.3	4.0
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-24	7.1	4.7
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-23	6.4	4.2
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-26	5.9	4.3
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-28	6.4	4.9
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-19	7.1	4.0
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-21	7.0	3.8
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-22	6.8	3.7
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-24	7.1	4.0
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-21	6.8	3.9
$\text{Ho}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-29	5.9	4.1
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-18	7.0	4.0
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-24	6.8	4.6
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-22	5.0	4.2
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-21	7.0	4.5
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-30	4.9	4.3
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-20	5.0	4.2
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	6.0	4.1
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-20	5.2	3.9
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-21	7.0	4.0
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-23	8.1	3.8
$\text{Ho}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-18	6.9	3.7
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-19	7.2	3.9
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-24	6.9	3.6

[0280] [表118]

$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-25	5.9	4.1
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-16	6.3	3.9
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-20	7.0	4.6
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	7.1	4.3
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	7.3	4.0
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-23	7.0	4.7
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-26	6.8	4.4
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-28	6.9	4.9
$\text{Ho}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-19	6.7	4.7
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-22	5.8	4.6
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-24	6.3	4.5
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-21	7.1	4.2
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-29	6.4	4.7
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-17	5.9	4.8
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-18	6.4	4.1
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-24	7.1	3.8
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-22	7.0	4.0
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-21	6.8	4.6
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-30	7.1	4.2
$\text{Er}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-29	6.8	4.5
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-28	6.5	4.1
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-27	7.0	3.9
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-25	6.8	4.0
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-18	5.8	3.8
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	6.3	3.7
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-10	7.1	4.0
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-26	6.4	3.9
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-20	5.9	3.6
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-19	6.4	3.8
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-17	7.1	3.7
$\text{Er}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-23	7.0	4.0
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-18	7.1	3.6
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-20	6.8	4.1
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-21	5.9	3.9

[0281] [表119]

$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-21	6.5	4.6
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	7.0	4.3
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-18	5.0	4.0
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-25	7.0	4.7
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-24	4.9	4.2
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-28	5.0	4.3
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-19	6.0	4.9
$\text{Er}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-20	5.2	3.9
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-23	8.1	4.0
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-22	6.9	4.7
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-19	6.7	4.6
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-17	7.2	4.5
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-20	6.9	4.2
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-22	5.9	4.7
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-20	6.3	4.8
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	7.0	4.1
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-23	7.1	3.8
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-18	7.3	4.0
$\text{Er}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-28	7.0	4.3
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	5.2	4.3
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-25	7.0	4.5
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-16	8.1	4.6
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-20	6.9	4.7
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	6.7	4.4
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	7.2	4.9
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-23	6.9	4.7
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-26	5.9	4.6
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-28	6.3	4.6
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-19	7.0	4.5
$\text{Er}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-21	7.1	4.2
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	7.0	4.8
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	6.8	4.1
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-29	6.9	3.8
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-17	6.7	4.0

[0282] [表120]

$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-18	7.1	4.6
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	5.9	4.2
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	6.4	4.5
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	7.1	4.3
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-27	7.0	4.1
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-25	6.8	3.9
$\text{Yb}_{1.8}\text{Na}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-30	7.1	4.0
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	5.9	3.7
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-25	6.5	4.0
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-16	7.0	3.9
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-20	6.8	3.6
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-22	5.0	4.1
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	7.0	3.9
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-23	4.9	4.6
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-26	5.0	4.3
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-28	6.0	4.0
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-19	5.2	4.7
$\text{Yb}_{1.8}\text{K}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-21	7.0	4.2
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-24	6.9	4.6
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-21	6.7	4.5
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-29	7.2	4.2
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-17	6.9	4.7
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-18	5.9	4.8
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-24	6.3	4.1
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	7.0	3.8
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-21	7.1	4.0
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-27	7.3	4.6
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-25	7.0	4.2
$\text{Yb}_{1.8}\text{Sr}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-30	6.8	4.5
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-27	6.7	4.1
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-25	7.1	3.9
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-18	5.8	4.0
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-22	6.3	3.8
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-10	7.1	3.7

[0283] [表121]

$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-26	6.4	4.0
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-22	5.9	3.9
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-18	6.4	3.6
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-25	7.1	3.8
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-24	7.0	3.7
$\text{Yb}_{1.8}\text{Ca}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-28	6.8	4.0
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ti}_{0.1}\text{O}_4$	-20	6.8	3.6
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{V}_{0.1}\text{O}_4$	-26	5.9	4.1
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cr}_{0.1}\text{O}_4$	-23	6.5	3.9
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mn}_{0.1}\text{O}_4$	-22	7.0	4.6
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Fe}_{0.1}\text{O}_4$	-19	6.8	4.3
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Co}_{0.1}\text{O}_4$	-17	5.8	4.0
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Cu}_{0.1}\text{O}_4$	-20	6.3	4.7
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Mo}_{0.1}\text{O}_4$	-22	7.1	4.2
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{W}_{0.1}\text{O}_4$	-20	6.4	4.3
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Nb}_{0.1}\text{O}_4$	-21	5.9	4.9
$\text{Yb}_{1.8}\text{Bi}_{0.2}\text{Ni}_{0.9}\text{Ta}_{0.1}\text{O}_4$	-23	6.4	3.9

[0284] 以上の結果から明らかなように、表75―表121に示された各酸化物は、n型熱電変換材料として優れた特性を有し、導電性も良好である。従って、上記各実施例におけるn型熱電変換材料に代えて、これらの酸化物を用いる場合にも、良好な熱電発電性能が発揮されるものと考えられる。

請求の範囲

[1] 電気絶縁性基板上に形成されたp型熱電変換材料の薄膜とn型熱電変換材料の薄膜を電氣的に接続してなる熱電変換素子であって、

(i) p型熱電変換材料が、

一般式(1): $\text{Ca}_a \text{A}^1_b \text{Co}_c \text{A}^2_d \text{O}_e$ (式中、 A^1 は、Na、K、Li、Ti、V、Cr、Mn、Fe、Ni、Cu、Zn、Pb、Sr、Ba、Al、Bi、Yおよびランタノイドからなる群から選択される一種又は二種以上の元素であり、 A^2 は、Ti、V、Cr、Mn、Fe、Ni、Cu、Ag、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $2.2 \leq a \leq 3.6$; $0 \leq b \leq 0.8$; $2.0 \leq c \leq 4.5$; $0 \leq d \leq 2.0$; $8 \leq e \leq 10$ である。)で表される複合酸化物、及び

一般式(2): $\text{Bi}_f \text{Pb}_g \text{M}^1_h \text{Co}_i \text{M}^2_j \text{O}_k$ (式中、 M^1 は、Na、K、Li、Ti、V、Cr、Mn、Fe、Ni、Cu、Zn、Pb、Ca、Sr、Ba、Al、Yおよびランタノイドからなる群から選択される一種又は二種以上の元素であり、 M^2 は、Ti、V、Cr、Mn、Fe、Ni、Cu、Ag、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $1.8 \leq f \leq 2.2$; $0 \leq g \leq 0.4$; $1.8 \leq h \leq 2.2$; $1.6 \leq i \leq 2.2$; $0 \leq j \leq 0.5$; $8 \leq k \leq 10$ である。)で表される複合酸化物からなる群から選ばれた少なくとも一種の酸化物であり、

(ii) n型熱電変換材料が、

一般式(3): $\text{Ln}_m \text{R}^1_n \text{Ni}_p \text{R}^2_q \text{O}_r$ (式中、Lnはランタノイドから選択される一種又は二種以上の元素であり、 R^1 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 R^2 は、Ti、V、Cr、Mn、Fe、Co、Cu、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq m \leq 1.7$; $0 \leq n \leq 0.5$; $0.5 \leq p \leq 1.2$; $0 \leq q \leq 0.5$; $2.7 \leq r \leq 3.3$ である。)で表される複合酸化物、

一般式(4): $(\text{Ln}_s \text{R}^3_t)_2 \text{Ni}_u \text{R}^4_v \text{O}_w$ (式中、Lnはランタノイドから選択される一種又は二種以上の元素であり、 R^3 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 R^4 は、Ti、V、Cr、Mn、Fe、Co、Cu、Mo、W、Nb及びTaからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq s \leq 1.2$; $0 \leq t \leq 0.5$; $0.5 \leq u \leq 1.2$; $0 \leq v \leq 0.5$; $3.6 \leq w \leq 4.4$ である。)で表される複合酸化物、

一般式(5): $\text{A}_x \text{Zn}_y \text{O}_z$ (式中、AはGa又はAlであり、 $0 \leq x \leq 0.1$; $0.9 \leq y \leq 1$; $0.9 \leq z \leq 1.1$ である。)で表される複合酸化物、及び

一般式(6): $\text{Sn}_{xx} \text{In}_{yy} \text{O}_{zz}$ (式中、 $0 \leq xx \leq 1; 0 \leq yy \leq 2; 1.9 \leq zz \leq 3$ である。)で表される複合酸化物

からなる群から選ばれた少なくとも一種の酸化物である、
ことを特徴とする熱電変換素子。

- [2] p型熱電変換材料が、一般式: $\text{Ca}_a \text{A}^1_b \text{Co}_4 \text{O}_e$ (式中、 A^1 は、Na、K、Li、Ti、V、Cr、Mn、Fe、Ni、Cu、Zn、Pb、Sr、Ba、Al、Bi、Y及びランタノイドからなる群から選択される一種又は二種以上の元素であり、 $2.2 \leq a \leq 3.6; 0 \leq b \leq 0.8; 8 \leq e \leq 10$ である。)で表される複合酸化物、及び一般式: $\text{Bi}_f \text{Pb}_g \text{M}^1_h \text{Co}_2 \text{O}_k$ (式中、 M^1 は、Sr、Ca及びBaからなる群から選択される一種又は二種以上の元素であり、 $1.8 \leq f \leq 2.2; 0 \leq g \leq 0.4; 1.8 \leq h \leq 2.2; 8 \leq k \leq 10$ である。)で表される複合酸化物からなる群から選ばれた少なくとも一種の酸化物であり、
n型熱電変換材料が、一般式: $\text{Ln}_m \text{R}^1_n \text{NiO}_r$ (式中、Lnはランタノイド元素であり、 R^1 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq m \leq 1.2; 0 \leq n \leq 0.5; 2.7 \leq r \leq 3.3$ である。)で表される複合酸化物、一般式: $(\text{Ln}_s \text{R}^3_t)_2 \text{NiO}_w$ (式中、Lnはランタノイド元素であり、 R^3 は、Na、K、Sr、Ca及びBiからなる群から選択される一種又は二種以上の元素であり、 $0.5 \leq s \leq 1.2; 0 \leq t \leq 0.5; 3.6 \leq w \leq 4.4$ である。)で表される複合酸化物、及び一般式: $\text{Ln}_x \text{R}^5_y \text{Ni}_p \text{R}^6_{q'} \text{O}_{r'}$ (式中、Lnは、ランタノイド元素であり、 R^5 は、Na、K、Sr、Ca、Bi及びNdからなる群から選択される少なくとも一種の元素であり、 R^6 は、Ti、V、Cr、Mn、Fe、Co及びCuからなる群から選択される少なくとも一種の元素であり、 $0.5 \leq x \leq 1.2; 0 \leq y \leq 0.5; 0.5 \leq p \leq 1.2; 0.01 \leq q' \leq 0.5; 2.8 \leq r' \leq 3.2$ である。)で表される複合酸化物からなる群から選ばれた少なくとも一種の酸化物である

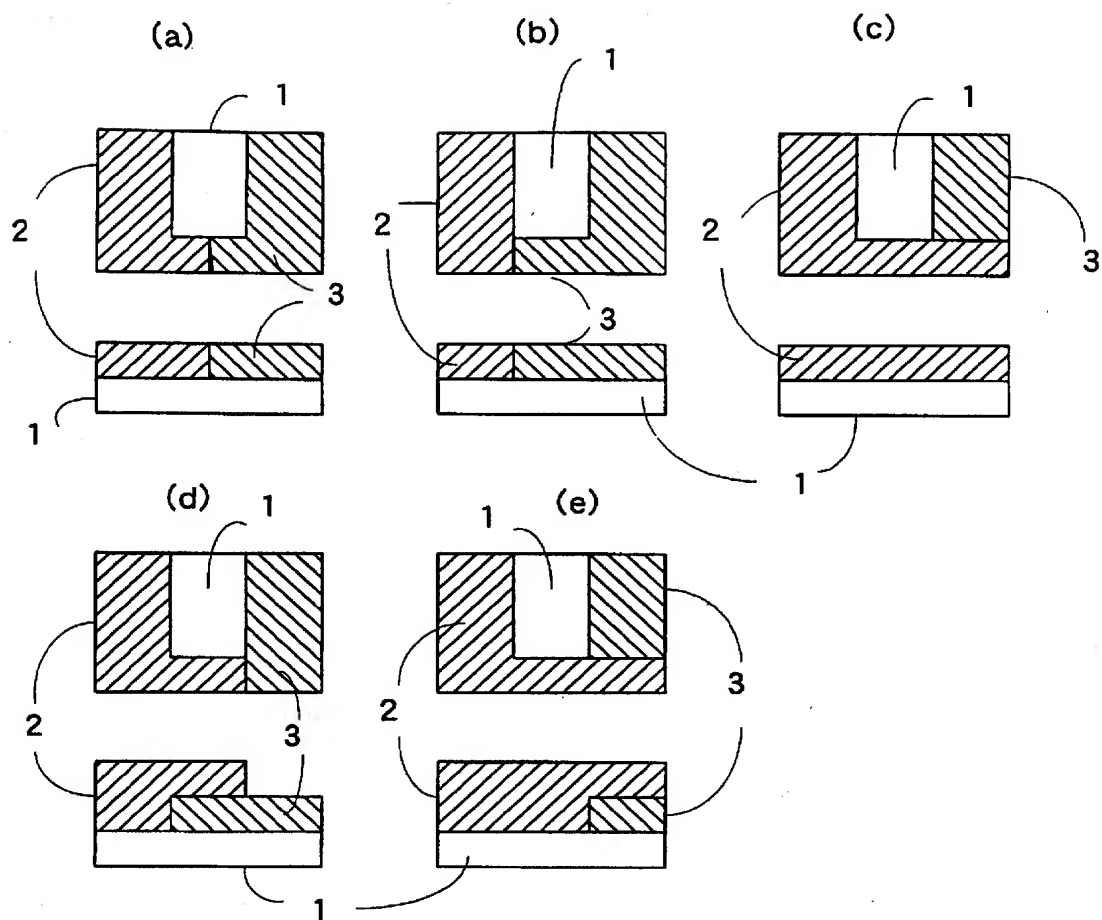
請求項1に記載の熱電変換素子。

- [3] p型熱電変換材料の薄膜とn型熱電変換材料の薄膜を電氣的に接続する方法が、p型熱電変換材料薄膜の一端とn型熱電変換材料薄膜の一端を直接接触させる方法、p型熱電変換材料薄膜の一端とn型熱電変換材料薄膜の一端を導電性材料を介して接触させる方法、又はp型熱電変換材料薄膜の一端とn型熱電変換材料薄膜の一端を直接接触させ、該接触部分を導電性材料で被覆する方法である

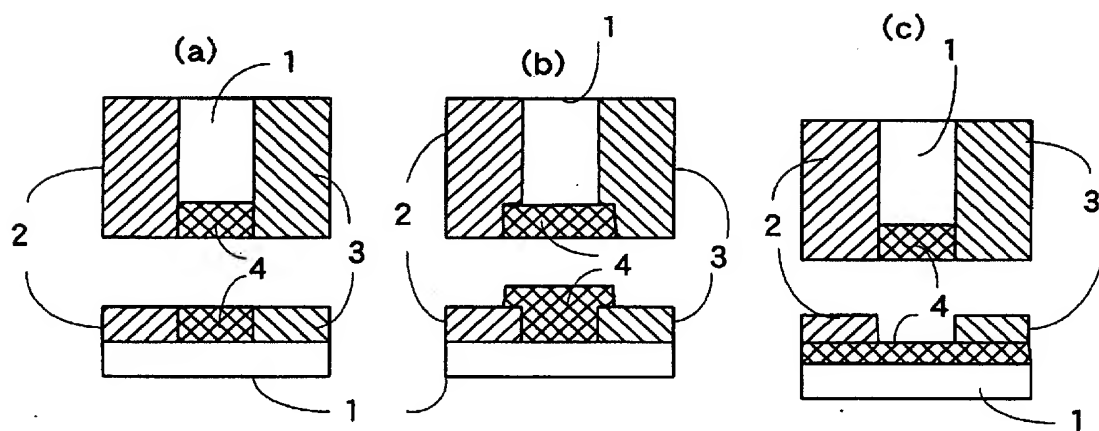
請求項1に記載の熱電変換素子。

- [4] p型熱電変換材料の薄膜とn型熱電変換材料の薄膜が、電気絶縁性基板の同一面又は異なる面に形成されたものである請求項1に記載の熱電変換材料。
- [5] 電気絶縁性基板が、プラスチック材料からなる基板である請求項1に記載の熱電変換材料。
- [6] 293K〜1073Kの温度範囲において、熱起電力が $60\mu\text{V/K}$ 以上である請求項1に記載の熱電変換素子。
- [7] 293K〜1073Kの温度範囲において、電気抵抗が $1\text{K}\Omega$ 以下である請求項1に記載の熱電変換素子。
- [8] 請求項1に記載された熱電変換素子を複数個用い、一個の熱電変換素子のp型熱電変換材料の未接合の端部を、他の熱電変換素子のn型熱電変換材料の未接合の端部に接続する方法で複数の熱電変換素子を直列に接続してなる熱電変換モジュール。
- [9] 請求項8に記載の熱電発電モジュールの一端を高温部に配置し、他端を低温部に配置することを特徴とする熱電変換方法。

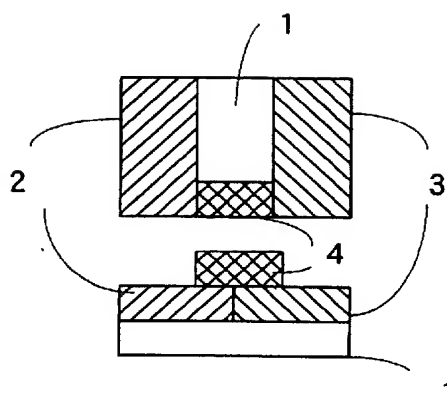
[図1]



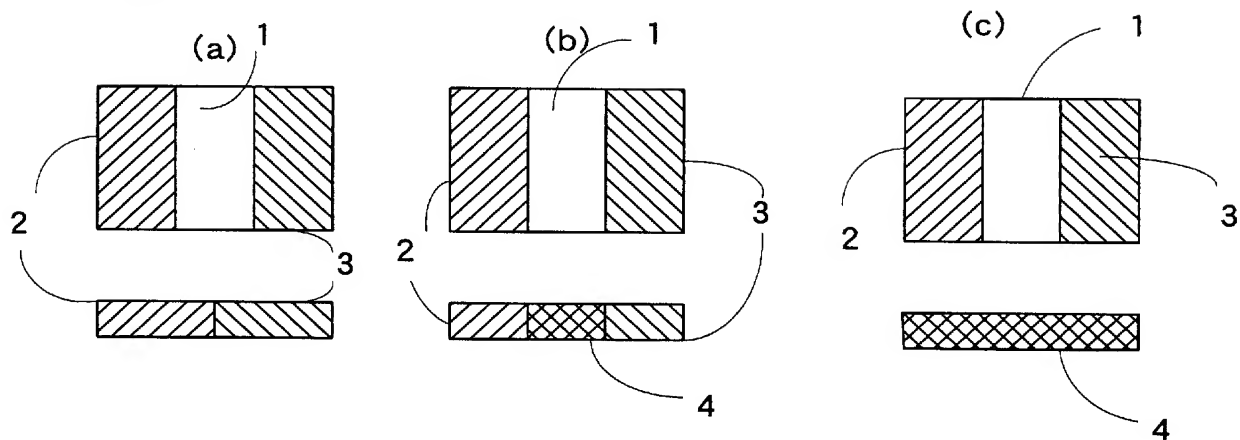
[図2]



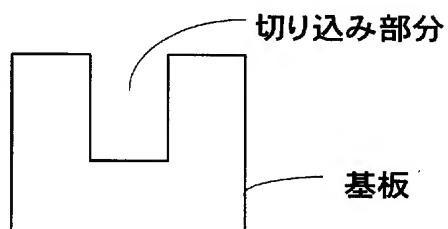
[図3]



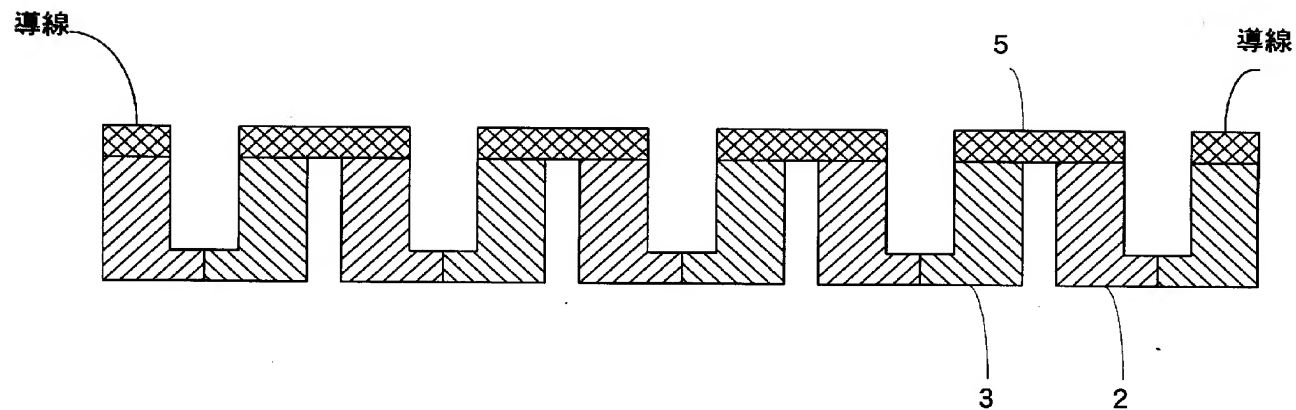
[図4]



[図5]

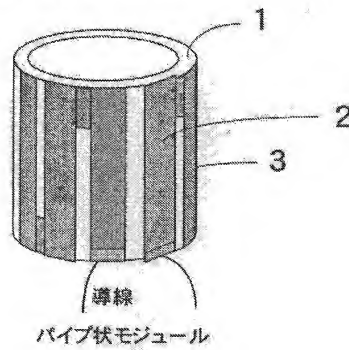


[図6]

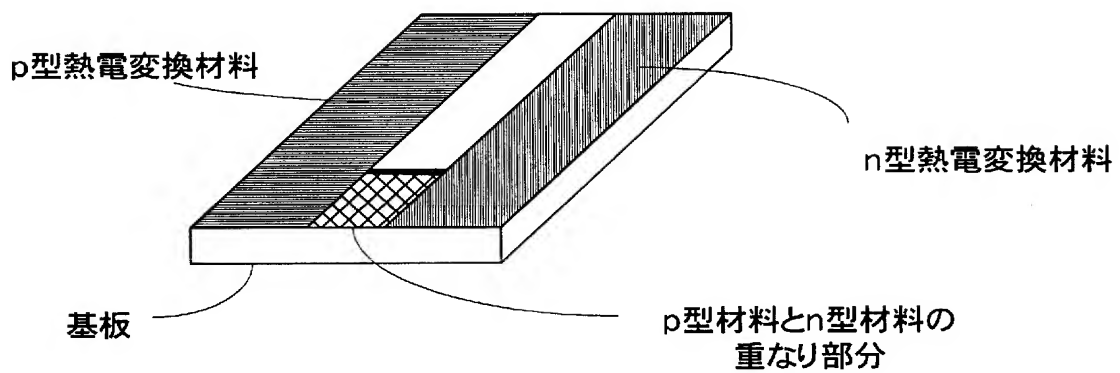


[図7]

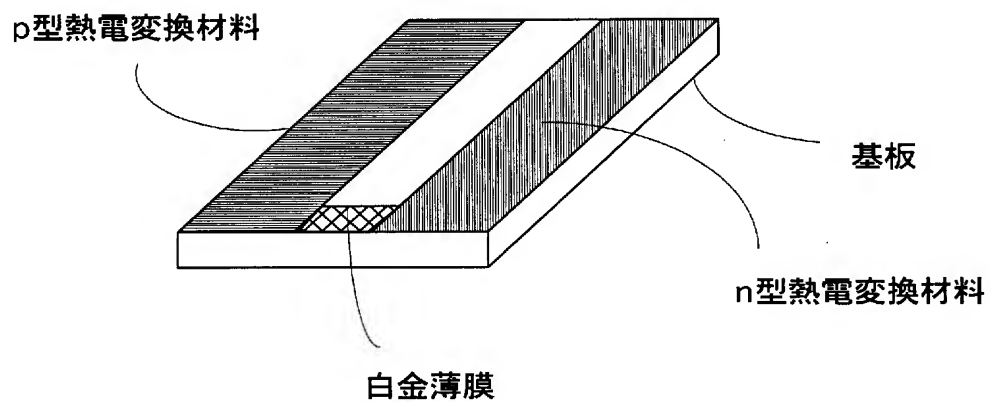
パイプ状モジュール



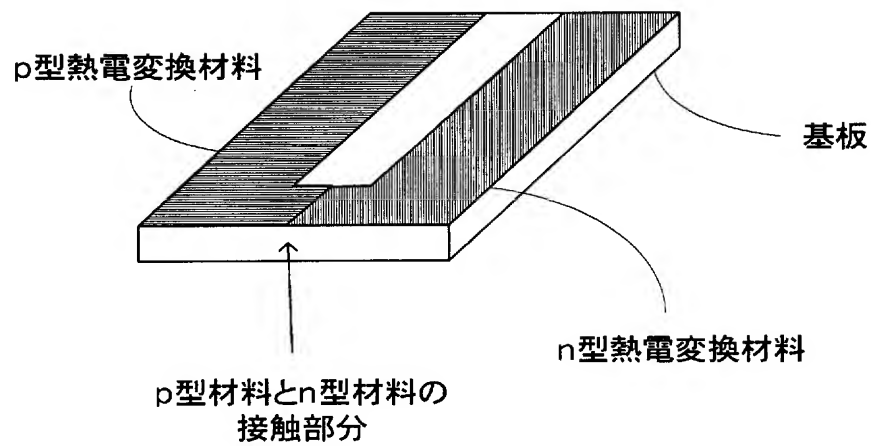
[図8]



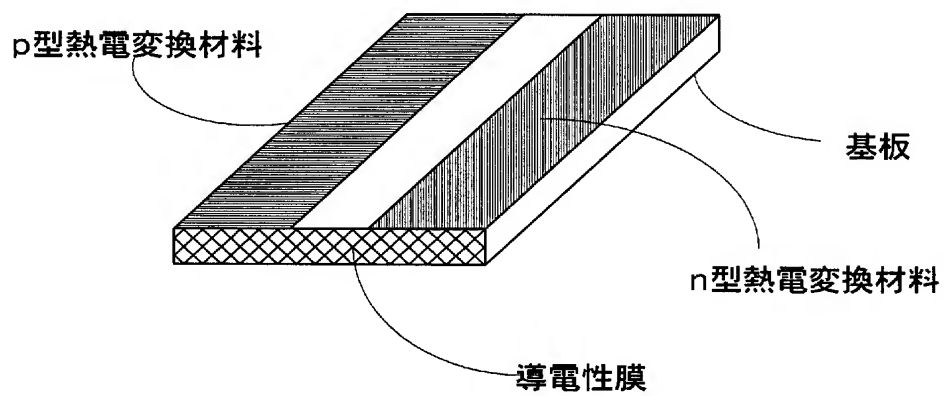
[図9]



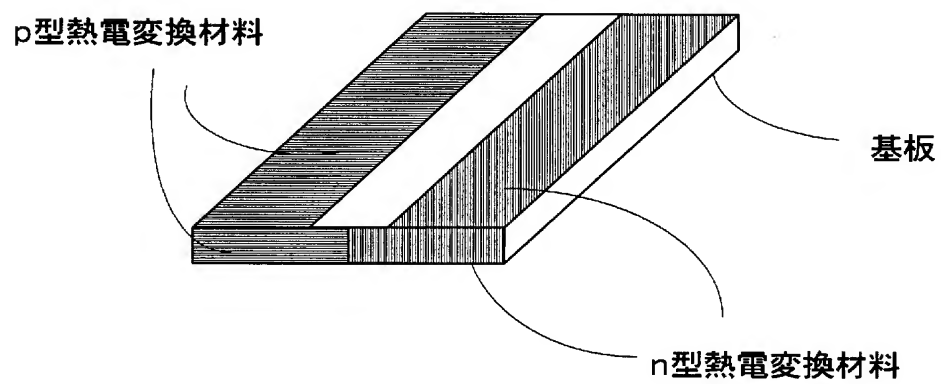
[図10]



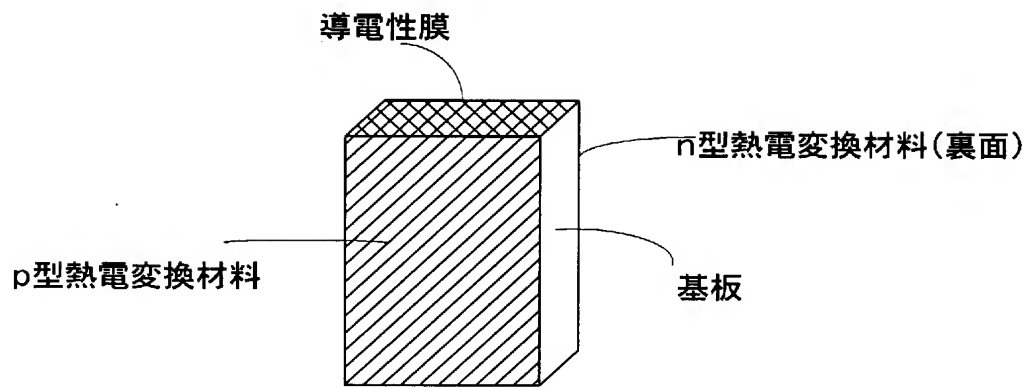
[図11]



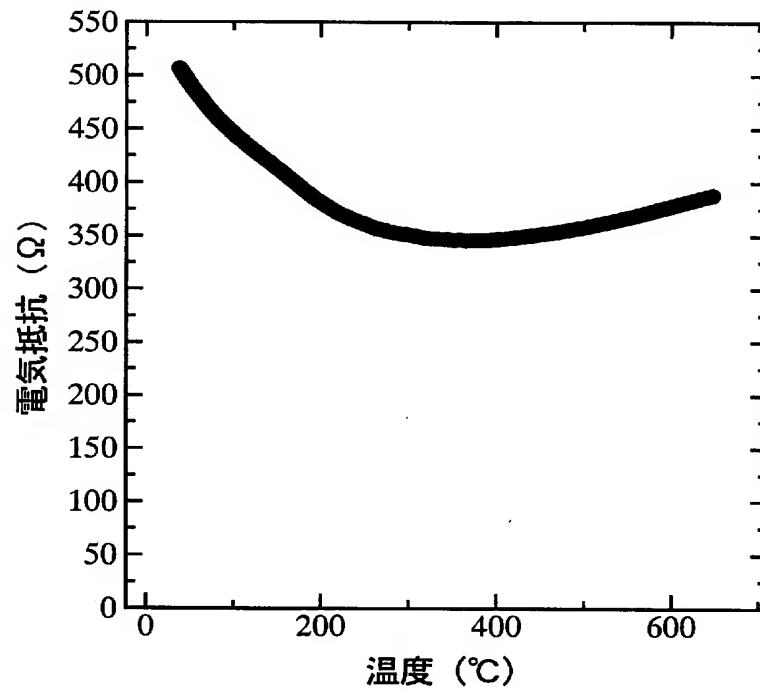
[図12]



[図13]



[図14]



INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/005133

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ H01L35/22, C04B35/495, 35/50, H01L35/32, 35/34, H02N11/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ H01L35/22, C04B35/495, 35/50, H01L35/32, 35/34, H02N11/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2005
Kokai Jitsuyo Shinan Koho	1971-2005	Toroku Jitsuyo Shinan Koho	1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2003-324220 A (Toyota Motor Corp.), 14 November, 2003 (14.11.03), Full text (Family: none)	1-9
Y	JP 2003-133600 A (Kitakawa Kogyo Kabushiki Kaisha), 09 May, 2003 (09.05.03), Full text (Family: none)	1-9
Y	JP 07-218348 A (Toppan Printing Co., Ltd.), 18 August, 1995 (18.08.95), Full text (Family: none)	1-9



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
14 April, 2005 (14.04.05)

Date of mailing of the international search report
10 May, 2005 (10.05.05)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/005133

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 03-295281 A (Matsushita Electric Industrial Co., Ltd.), 26 December, 1991 (26.12.91), Full text (Family: none)	1-9
Y	JP 2002-335021 A (Japan Aviation Electronics Industry Ltd.), 22 November, 2002 (22.11.02), Full text (Family: none)	1-9
Y	JP 2002-076447 A (National Institute of Advanced Industrial Science and Technology), 15 March, 2002 (15.03.02), Par. No. [0021] (Family: none)	1-9
Y	JP 2003-306380 A (National Institute of Advanced Industrial Science and Technology), 28 October, 2003 (28.10.03), Claims (Family: none)	1-9
Y	JP 2003-306381 A (National Institute of Advanced Industrial Science and Technology), 28 October, 2003 (28.10.03), Claims (Family: none)	1-9
Y	JP 2003-282964 A (National Institute of Advanced Industrial Science and Technology), 03 October, 2003 (03.10.03), Claims & WO 2003/081686 A1	1-9
Y	JP 2003-008086 A (Idemitsu Kosan Co., Ltd.), 10 January, 2003 (10.01.03), Claims (Family: none)	1-9

A. 発明の属する分野の分類 (国際特許分類 (IPC))

Int.Cl.⁷ H01L35/22, C04B35/495, 35/50, H01L35/32, 35/34, H02N11/00

B. 調査を行った分野

調査を行った最小限資料 (国際特許分類 (IPC))

Int.Cl.⁷ H01L35/22, C04B35/495, 35/50, H01L35/32, 35/34, H02N11/00

最小限資料以外の資料で調査を行った分野に含まれるもの

日本国実用新案公報	1922-1996年
日本国公開実用新案公報	1971-2005年
日本国実用新案登録公報	1996-2005年
日本国登録実用新案公報	1994-2005年

国際調査で使用した電子データベース (データベースの名称、調査に使用した用語)

C. 関連すると認められる文献

引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
Y	JP 2003-324220 A (トヨタ自動車株式会社) 2003.11.14, 全文 (ファミリーなし)	1-9
Y	JP 2003-133600 A (北川工業株式会社) 2003.05.09, 全文 (ファミリーなし)	1-9
Y	JP 07-218348 A (凸版印刷株式会社) 1995.08.18, 全文 (ファミリーなし)	1-9

☒ C欄の続きにも文献が列挙されている。☐ パテントファミリーに関する別紙を参照。

* 引用文献のカテゴリー

「A」 特に関連のある文献ではなく、一般的技術水準を示すもの
「E」 国際出願日前の出願または特許であるが、国際出願日以後に公表されたもの
「L」 優先権主張に疑義を提起する文献又は他の文献の発行日若しくは他の特別な理由を確立するために引用する文献 (理由を付す)
「O」 口頭による開示、使用、展示等に言及する文献
「P」 国際出願日前で、かつ優先権の主張の基礎となる出願

の日の後に公表された文献

「T」 国際出願日又は優先日後に公表された文献であって出願と矛盾するものではなく、発明の原理又は理論の理解のために引用するもの
「X」 特に関連のある文献であって、当該文献のみで発明の新規性又は進歩性がないと考えられるもの
「Y」 特に関連のある文献であって、当該文献と他の1以上の文献との、当業者にとって自明である組合せによって進歩性がないと考えられるもの
「&」 同一パテントファミリー文献

国際調査を完了した日

14.04.2005

国際調査報告の発送日

10.5.2005

国際調査機関の名称及びあて先

日本国特許庁 (ISA/J P)

郵便番号100-8915

東京都千代田区霞が関三丁目4番3号

特許庁審査官 (権限のある職員)

加藤 浩一

電話番号 03-3581-1101 内線 3462

C (続き) . 関連すると認められる文献		
引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
Y	JP 03-295281 A (松下電器産業株式会社) 1991.12.26, 全文 (ファミリーなし)	1-9
Y	JP 2002-335021 A (日本航空電子工業株式会社) 2002.11.22, 全文 (ファミリーなし)	1-9
Y	JP 2002-076447 A (独立行政法人産業技術総合研究所) 2002.03.15, 【0021】 (ファミリーなし)	1-9
Y	JP 2003-306380 A (独立行政法人産業技術総合研究所) 2003.10.28, 特許請求の範囲 (ファミリーなし)	1-9
Y	JP 2003-306381 A (独立行政法人産業技術総合研究所) 2003.10.28, 特許請求の範囲 (ファミリーなし)	1-9
Y	JP 2003-282964 A (独立行政法人産業技術総合研究所) 2003.10.03, 特許請求の範囲 & WO 2003/081686 A1	1-9
Y	JP 2003-008086 A (出光興産株式会社) 2003.01.10, 特許請求の範囲 (ファミリーなし)	1-9